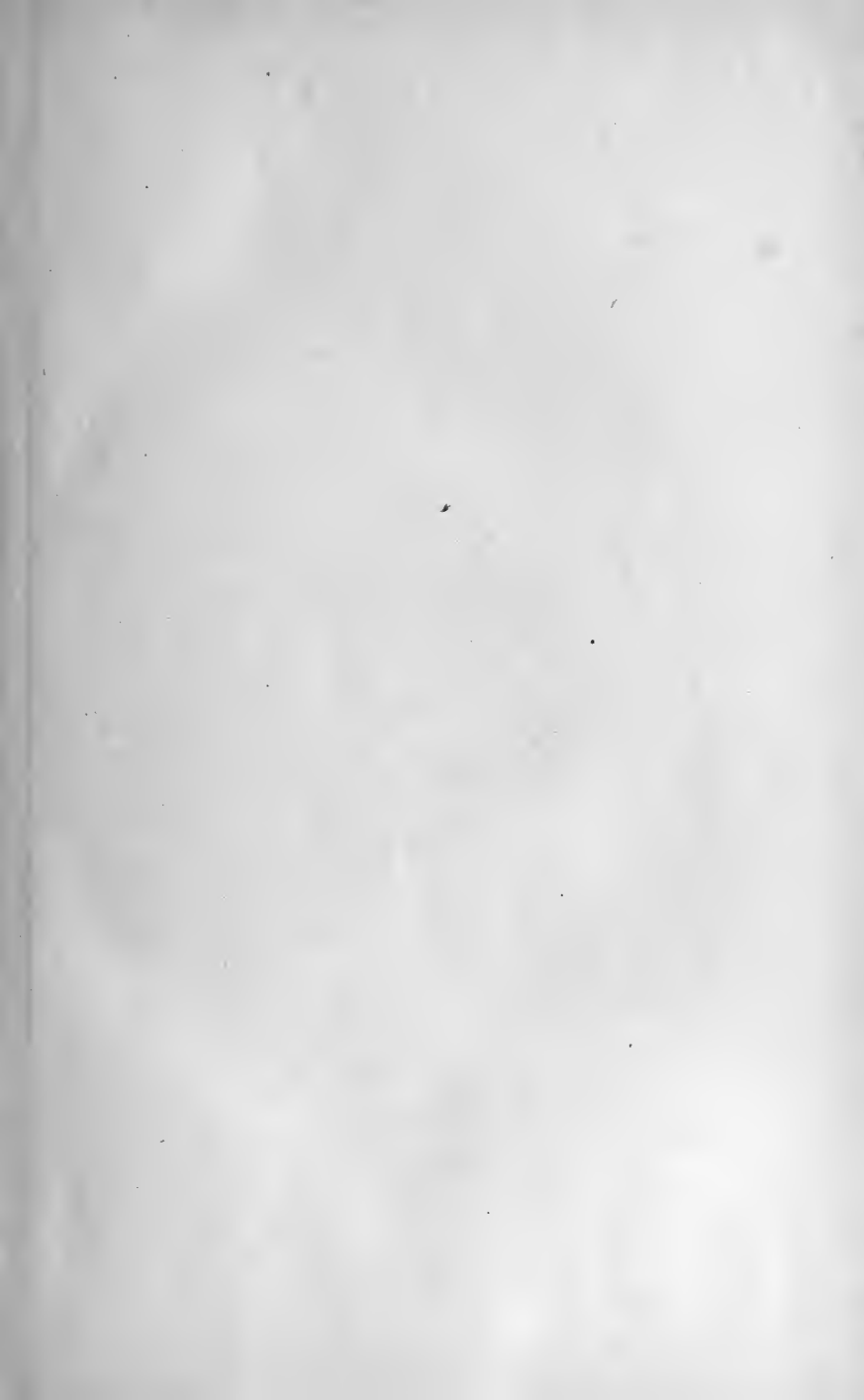




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# **PUBLIC EDUCATION IN KENTUCKY**

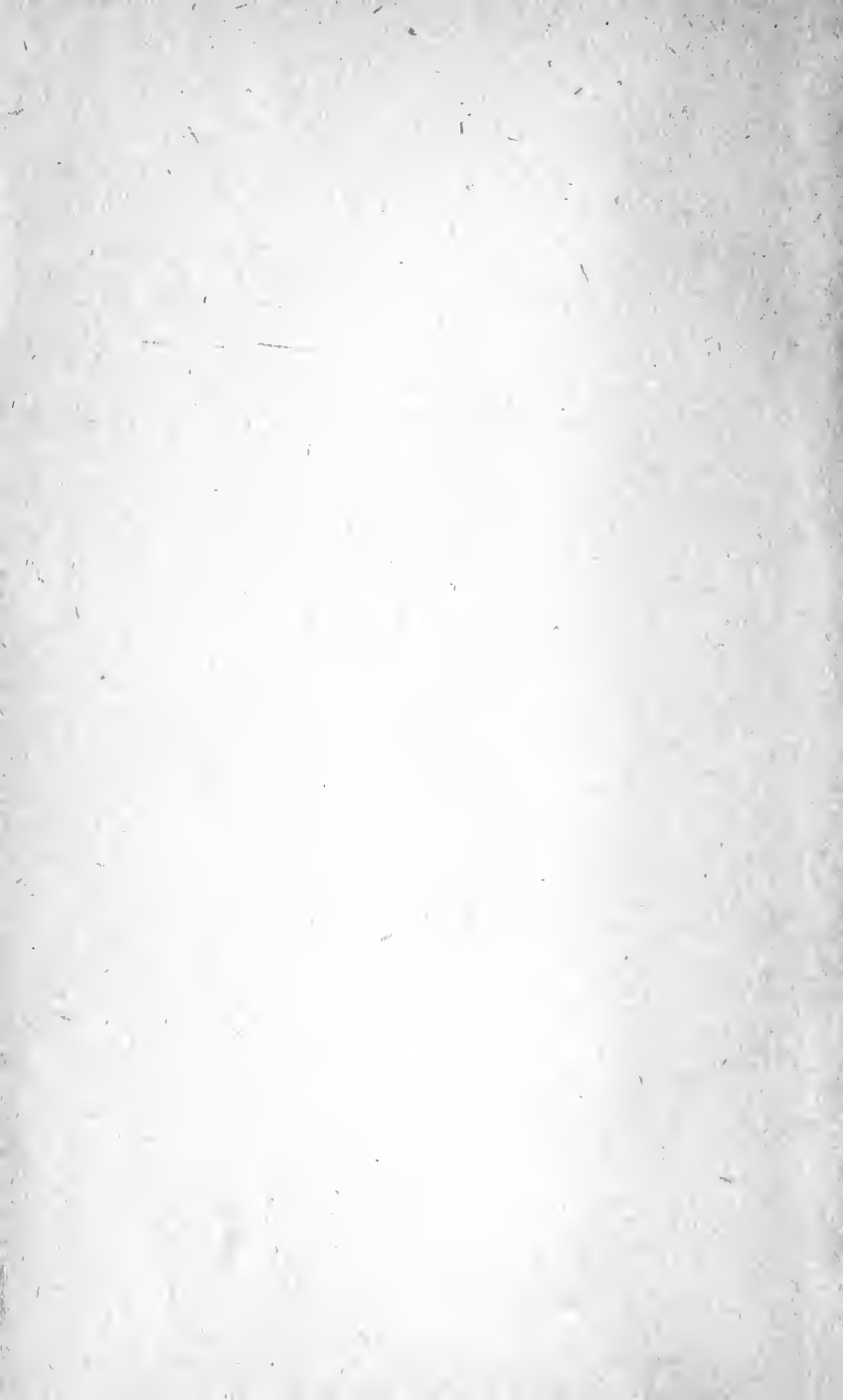
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**A REPORT BY THE  
KENTUCKY EDUCATIONAL  
COMMISSION**

**GENERAL EDUCATION BOARD  
61 BROADWAY**

**NEW YORK**

**1921**



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PUBLIC EDUCATION  
IN KENTUCKY



# PUBLIC EDUCATION IN KENTUCKY

A REPORT BY THE  
KENTUCKY EDUCATIONAL  
COMMISSION

PREPARED UNDER THE DIRECTION OF  
THE COMMISSION  
BY THE GENERAL EDUCATION BOARD

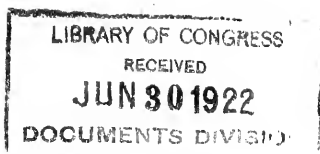
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## LETTER OF TRANSMITTAL

HONORABLE EDWIN P. MORROW

*Governor of the Commonwealth of Kentucky*

Frankfort, Kentucky

The legislature of Kentucky in 1920 enacted a law providing for a state educational survey. This law is as follows:

- 1. That the Governor be, and is hereby authorized and empowered to appoint a commission of five persons, to make a survey of the public educational system of the State, including all schools and educational institutions supported in whole or in part by public taxation, for the sake of determining the efficiency of their work, and to report its findings, with recommendations for improvement, to the Governor.
- 2. It shall be the duty of said commission to employ experts, not residents of Kentucky, to make a thorough survey of the school system of the State as to organization, co-ordination, administration and general efficiency, and to conduct such survey in accordance with approved scientific standards of educational research.
- 3. That the members of said commission shall serve without pay, except actual expenses incurred in the discharge of their duties. Said commission is hereby authorized and empowered to purchase such supplies and employ such clerical help in addition to the expert service hereinbefore provided, as may be necessary for the proper discharge of its duty within the limitation herein prescribed.
- 4. That the commission and its employees shall be accorded free access to all public records. All persons having charge of any schools or educational institutions supported wholly or in part by public funds shall furnish all the information available and render all the assistance possible in making the survey complete, and any person who wilfully withholds records or information within his possession or obstructs the work of the commis-

sion in any way, shall be fined in any sum not less than one hundred dollars or more than five hundred dollars in any court of competent jurisdiction.

- 5. That there is hereby appropriated out of any money in the treasury not otherwise appropriated the sum of ten thousand dollars or as much thereof as may be necessary, for the purpose of defraying the expense of the survey hereby proposed.

- 6. That on account of the pressing need for an early reorganization of the school system of the State, an emergency is hereby declared to exist and this law shall take effect from and after its passage and approval by the Governor.

In accord with the provisions of this law, you appointed an Educational Survey Commission composed of the following five members: W. A. Ganfield, President of Centre College, Danville; Alex. G. Barret, lawyer, member of the Louisville Board of Education, Louisville; J. L. Harman, President of Bowling Green University, Bowling Green; C. J. Haydon, President of the Springfield Board of Education, Springfield; Miss Katie McDaniel, insurance, formerly County Superintendent of Christian County, Hopkinsville. The Commission organized May 11, 1920, electing Dr. Ganfield chairman, and Mr. Barret secretary.

Pursuant to the provisions of section 2 of the enactment, the Commission secured the assistance of the General Education Board of New York City in making the survey. The General Education Board furnished to the Commission the services of the following staff: Dr. Frank P. Bachman, local director, Frank L. Shaw, statistician, and Miss Anna C. Thornblum, secretary. Dean M. E. Haggerty, College of Education, University of Minnesota, advised on the testing program.

The State of Kentucky appropriated the sum of \$10,000, of which \$8,000 was used in part payment of the expenses of field work, and \$1,000 in part payment of printing the report. In addition to providing the survey staff, the General Education Board contributed the sum of \$15,000.

Fifteen months were devoted to the survey. During this time Dr. Bachman visited sixty-six counties and made a careful study of the conditions in thirty-three of them, and also studied conditions in about half of the principal cities of the state. He had the active co-operation of the educators of Kentucky, including representatives from the faculties of the colleges, normal schools, and the University of Kentucky, members of the state department of education, and county and city superintendents.

Standard tests or examinations were given to the school children in nine representative counties and in fifteen cities. Fifteen thousand seven hundred pupils were examined in the fifth, seventh, and eighth grades, and nearly 59,000 test papers were marked and the results tabulated. Data on pupil progress were collected from these same nine counties, and from 222 graded school districts and 47 cities, or from a total of 136,828 children. Information was collected on the training of 11,712 of the 13,563 teachers, or 86 per cent. of the total number.

Questionnaires were sent to all city superintendents, graded school principals, and county superintendents,

asking for information on school finances, length of school day and term, consolidated schools, provisions for supervision, attendance officers, medical inspection, school nurses, office equipment, and clerical assistance. Information of many kinds was also collected from the records of the state department of education, school laws, and other sources.

The Commission desires to acknowledge with sincere appreciation and gratitude the generous professional and financial assistance of the General Education Board. We further record our grateful acknowledgment of the helpful counsel and advice of Dr. Wallace Buttrick, President of the General Education Board, and of Dr. Abraham Flexner, Secretary of the Board. Dr. Flexner also gave liberally of his time in perfecting the report, and made several visits to the state to counsel with the survey staff and the Commission.

We would further express appreciation of the splendid co-operation and helpful service rendered by the Hon. George Colvin, State Superintendent of Public Instruction, and Dr. John W. Carr, Director of Health Education.

Members of the Commission have served without pay, being reimbursed only for the actual expenses involved in the discharge of their duties. The \$1,000 reserved for this purpose will more than provide for their expenses.

The Commission has not outlined plans or recommendations that are impossible of attainment. The suggestions and recommendations offered are practicable

and within reach. We venture to hope that the findings of this survey will aid the citizens and the legislature of the Commonwealth in providing a school system that will ultimately afford to all the children of the state "the power that knowledge gives."

Very respectfully,

(Signed) W. A. GANFIELD, *Chairman*

ALEX. G. BARRET

J. L. HARMAN

C. J. HAYDON

KATIE MCDANIEL



PART I  
PRESENT CONDITION OF SCHOOLS  
CHAPTERS I-IX



# Public Education in Kentucky

## I. PUBLIC EDUCATION IN KENTUCKY

**E**DUCATION is the sole hope of democracy. "A popular government," wrote James Madison, "without popular information, or the means of acquiring it, is but the prologue to a farce or a tragedy, or probably both. A people who mean to be their own governors must arm themselves with the power that knowledge gives."

How well has Kentucky armed itself "with the power that knowledge gives?"

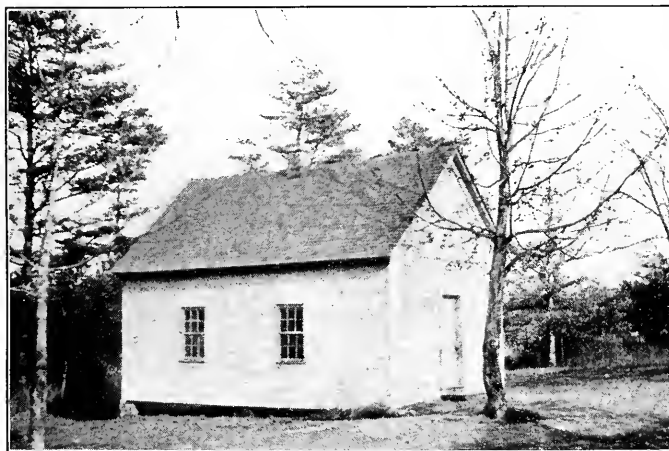
Dr. Leonard P. Ayres, one of the foremost authorities in the field of public education, has recently published a comparative study of the efficiency of state school systems. According to Dr. Ayres, Kentucky ranked thirty-fifth in 1890, thirty-sixth in 1900, fortieth in 1910, and forty-fifth in 1918. That is, during the last four decades Kentucky has steadily fallen behind, when compared with the other states and territories. In illiteracy Kentucky ranked thirty-sixth in 1900, in 1910, and in 1920.

What is the explanation? Physically, the state is highly favored. Of its 40,000 square miles, 10,000 are

surpassed in fertility by no other land either in America or Europe; 22,000 more, not quite equal to the best, are still excellent; only about 7,000 square miles are of inferior quality. "It is doubtful," writes Shaler, "if an equally good showing can be made for any other state in the Mississippi Valley, and there are few regions in the world where so large an area with so little waste land can be found." Coal, iron, and stone abound. The eastern coal district, "somewhat less valuable than that of Pennsylvania, is exceeded in value by that of no other state." The deposits of iron ore are outranked only by those of five or six other states. Thus the state is admirably adapted to agriculture and is liberally endowed with fuel, iron, and stone.

Not the niggardliness of nature, but the mischance of history holds the state back. Peopled in the first instance by emigrants from Virginia, the state inherited the slave-holding system. Social organization was distinctly aristocratic. Manual toil was stigmatized. Kentuckians were generally engaged in activities that needed little capital and gave little employment or outlook to white labor. The coal and iron lay untouched below the soil, and emigration passed Kentucky by. Even to-day the conservatism of the state discourages well-trained, progressive, and adventurous youth. The handicaps under which Kentucky suffers and has suffered are man-made and can be removed by men.

Poor education is the inevitable result of the conditions described. The political leaders of ante-bellum Kentucky



Oldest Type of One-Room Rural Schoolhouses



were not thinking of a whole state peopled by a vigorous and industrious race armed with the power that knowledge gives. An excellent Anglo-Saxon stock thus largely lost, as far as public education is concerned, the first century of its history. Public schools got but a feeble start; higher education, until very recent years well-nigh ignored by the state, was provided by a few small colleges, which, invaluable to the students attending them, were entirely inadequate to meet the situation. The general level of education was thus low, and an ill-educated population neither desires education keenly nor does it produce the wealth needed to support the schools on which the hope of better things depends. Thus social sluggishness accounts for the defects of the school system; and an inferior school system prolongs the period of social and industrial inertia.

Fortunately there is evidence that a movement in the right direction has started. Public interest in education is being aroused and various organizations are demanding higher standards and better conditions. This new interest found expression in the enlightened and progressive educational legislation of 1920. These measures, supported by both parties, provided, among other things, for the election of county boards of education by the people, for an increase of mandatory county taxes, for better school attendance, and for the state certification of teachers. Already the sums available for the common schools have greatly increased, rising from \$8,309,000 for current expenses in 1917-1918 to about \$10,000,000

in 1920-1921. There has apparently been a corresponding improvement in school attendance.

Fundamental social changes are coming about. The old order, which began to disintegrate after the Civil War, has now practically disappeared; modern democratic conceptions of social and industrial organization are in the air. They have not yet completely and securely established themselves; they are far from dominating the political and educational policy of the state; but they have found a voice and will assuredly prevail. The present survey, made at the instance of the constituted authorities, with the support of the progressive leaders of the state, is a contribution to this end.

The report endeavors to depict fairly and thoroughly the educational conditions in the state. It will describe the existing organization and, building upon progress recently made, will suggest the next steps that are at the moment desirable and feasible. It is futile to discuss ideals. An educational Utopia cannot be brought about in Kentucky at once. At most measures can be taken which, themselves an improvement, will facilitate advance. That done, the rest will have to be left to the patient effort and devoted self-sacrifice of successive generations.

## II. STATE ORGANIZATION AND ADMINISTRATION

**K**ENTUCKY entered the Union in 1792; not until 1908 did the laws of the state actually require all local units to establish schools and levy taxes for their maintenance. So recently have the people of the state realized the full importance of public education in a democracy!

The slow movement which thus culminated a dozen years ago may be briefly sketched. Very early in its history, public lands were appropriated for the establishment of seminaries and colleges. No distinction was made between public and private institutions—the state gave impartially to both—and no thought was taken at this time of the prior importance of common schools. These were first legally recognized in 1838. The state had received—like other states—a gift from the federal government; it undertook to apportion the income from \$850,000—something over one-half its share—to common schools; but it did not undertake to require, to support, or to supervise public education.

The constitution of 1850 declared the principal of the common school fund to be inviolate, but laid upon the general assembly no mandate to establish schools. The

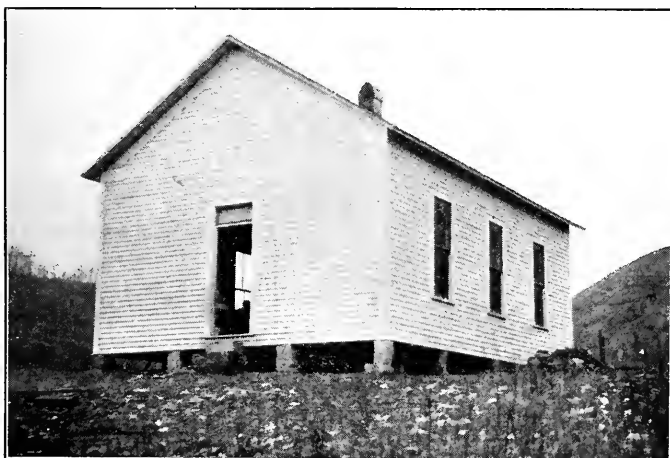
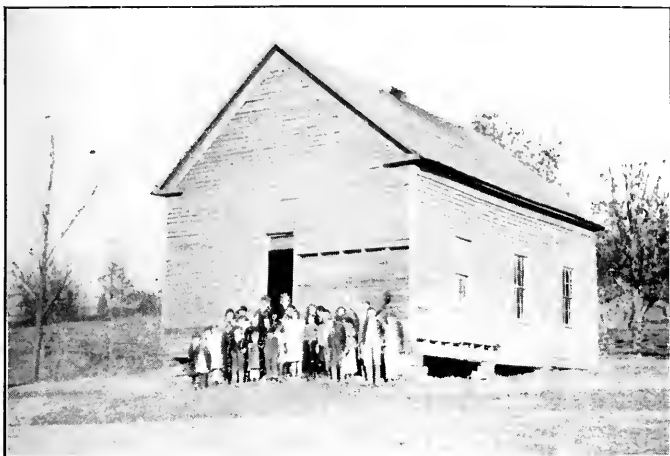
general assembly therefore consistently declined to levy taxes for school purposes. Nevertheless, on four different occasions—in 1849, 1855, 1869, and 1882—the people by large majorities approved successive propositions to levy state taxes for school purposes. Thus, the income of the common schools was increased by popularly imposed levies, amounting in the aggregate to twenty-two cents on each \$100 of taxable property.

The mandate requiring the general assembly to “provide for an efficient system of common schools throughout the state” and to appropriate to the common schools the income from the common school fund and any sum which may be produced for purposes of common school education by taxation or otherwise, first appeared in the constitution of 1891. Even so, the general assembly on its own initiative and without a direct mandate from the people did not levy a dollar of public taxes in support of public schools until 1904<sup>1</sup>—thirteen years after being empowered to do so. Not until 1893 did the statute books contain a single line of legislation actually requiring the establishment of schools and the levying of local taxes in support thereof, and not until 1908 was this mandatory legislation made general for all local units.

The legislation of 1893 and 1908 transformed a volun-

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<sup>1</sup>There is one possible exception to this statement. The general assembly of its own accord levied in 1880 a tax of one-half of one cent on each \$100 of assessed value of property for the support of the Agricultural and Mechanical College.



Three-Window Rural Schoolhouses, Without Porch or Cloakroom



tary into a compulsory system, and thus registered an entirely new conception of the state's relation to public education. Prior to 1893 every community decided for itself by majority vote whether or not a public school should be established. Nowadays not only common schools, but also high schools, must be maintained. Similarly, the community used to decide by vote whether or not it would levy a local school tax; nowadays local school taxes must be levied up to a fixed minimum. Then, any kind of schoolhouse might be built; now, only such schoolhouses may be erected as are approved by the superintendent of public instruction. Then, state school funds might be expended for any school purpose; these may now be expended only for the payment of teachers' salaries, and all expenditures, irrespective of whether the funds are derived from local or from state taxation, are subject to inspection by the superintendent of public instruction or his agents. Formerly, parents might send their children to school or not, as they pleased; now they must send them, under penalty of law, for the full time the schools are in session. The trustees used to certificate the teachers for their respective schools; now teachers are certificated by a state board of examiners.<sup>1</sup> The trustees likewise used to fix the length of term; it must now be at least six months, and the statute looks forward to further extensions. The trustees formerly selected the textbooks; a state commission now selects

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<sup>1</sup>A few state and approved private higher institutions, as well as city boards of education, are also authorized to certificate teachers.

them. They prescribed the course of study; this is now prepared by the state board of education. The state board of education also prescribes general rules and regulations for the government of all schools, and the superintendent of public instruction is empowered to see that they are observed.

The options originally exercised by local authorities have thus been abolished, and most of their former powers transferred to the state board of education, the superintendent of public instruction, or other state boards or officials. Obviously, if these large powers are to be effective, the central educational authority would have to be reorganized accordingly. It must be so equipped as to exercise intelligently the functions with which it has been lately endowed. But this has not been done. Though the duties and responsibilities of the state department have become vastly greater, the department remains to-day substantially what it was when its duties and responsibilities were nominal.

#### STATE BOARD OF EDUCATION

The schools of Kentucky—elementary and high—are organized as a single system, over which preside a state board of education and a superintendent of public instruction. These officials deal with educational matters of general interest to the people of the state. Similarly, the public schools of a county, exclusive of those of graded and city school districts, form a subordinate local system, presided over by a county board of educa-

tion, which deals with educational matters of particular interest to the county. Two other subordinate and local systems—the graded school districts and the cities—are independent of the county system, though a part of the state system. Boards of trustees or boards of education have charge of the schools in the respective graded school or city school districts. The central authority is meant to give unity to the educational effort of the state; the local authority is meant to promote local interest, pride, and initiative.

Kentucky's state board of education was created in 1838, and was then and still is composed of *ex officio* members—the secretary of state, the attorney-general, and the superintendent of public instruction. Its composition is unfortunate, and its powers have never been such as to enable it to make itself effective. It is authorized to hold funds and property for the benefit of the common schools; prescribe rules and regulations for the government of the schools; make courses of study; and recommend suitable books for district libraries. But these duties are largely nominal. There are, for example, no funds or property to hold; and prescribing rules and regulations for the government of the schools, courses of study, and lists of suitable books for district libraries are technical matters in which an *ex officio* board has taken and could take only a perfunctory or ineffectual interest.

In dealing with the state board of education, the legislature has not pursued a consistent policy. At one time

the general assembly confers powers, at another takes them away. For example, until 1852 the state board participated in the distribution of the common school fund, but this function was thereafter exercised by the state superintendent and the state auditor. Between 1852 and 1893 the board recommended textbooks for use in the common schools, but was thereafter entirely relieved of this duty. Similarly, the board for many years prescribed blanks and forms for all school records and reports, but in 1893 this authority was transferred to the state superintendent.

Meanwhile other boards have been created to share or altogether take over functions that properly belong to a state board of education. To illustrate: The state board of education prescribes rules and regulations governing high school certificates; issues high school certificates to graduates of higher institutions within and without the state; grants certificating powers to private institutions doing teacher-training work of a satisfactory grade; extends, for life, certificates of teachers having twenty years of experience. Yet the real power of certification is vested in the state board of examiners, which is practically an independent body.

Again, a properly organized state board of education would supervise teacher-training institutions, handle all matters concerning vocational education, and select textbooks for the public schools; but Kentucky, splitting up its educational administration, possesses four different boards of normal school regents; a state board of

vocational education, which includes the members of the state board of education, created as recently as 1918; and an independent state textbook commission, created in 1914 to select textbooks.

But whatever its powers, an *ex officio* state board of education cannot be effective. A man elected to one office may not have the interest and seldom has the time requisite to the performance of an entirely different set of duties. The secretary of state and the attorney-general may, as members of the state board of education, give the state superintendent casual assistance, but they have their own special tasks for the performance of which they are responsible to the people, and these will and should receive their first attention. Moreover, they know that in the long run the people hold the superintendent of public instruction responsible for the conduct of the schools, and they cannot make themselves answerable for his administration.

The political character of the board also prevents it from assuming a position of influence. Each of its members is nominated by a political party, elected by party vote, and is expected to be loyal to party interests. Under these circumstances, whatever they do, they are likely to be regarded as partisan. Perhaps this fact, as much as lack of public sentiment, explains the reluctance of the general assembly to entrust to the board duties and functions that properly belong to it, and accounts for the creation of other boards—such as boards of normal school regents, state board of examiners, state

textbook commission, state board of vocational education, etc.—which divide both authority and responsibility and render effective administration impossible.

Again, the state board has, since 1891, lacked continuity. Every four years sees a complete change in personnel, and with it at least the possibility of a complete change in educational policies. A new administration comes into office without plans or policies of its own, and as a rule goes out before policies and plans can be developed. The public schools of the state have thus been left to drift. No official is in position to propose to the legislature or the people a policy which looks ahead over a space of years; chaos and backwardness are the inevitable consequences.

The present situation as respects the state board may be summarized as follows: The state board has recently assumed large educational responsibilities, financial and supervisory, and is without any proper agency to meet them. The state board of education is impotent because of its political complexion, its *ex officio* composition, and its short tenure. The state should have a properly constituted board, invested with proper powers—including those now exercised by the normal school regents, the state textbook commission, state board, of examiners, and vocational education board. The state can neither form nor pursue a coherent educational policy in any other way. The consolidation suggested would obviously create a strong educational department at Frankfort; but, as will appear from suggestions to be

made as we proceed, local units will retain all the powers and all the opportunity that they need.

#### STATE TEXTBOOK COMMISSION

The work of the boards created to share functions properly belonging to a state board of education will be discussed in other connections. By way of illustrating the situation a brief account will be given here of the state textbook commission.

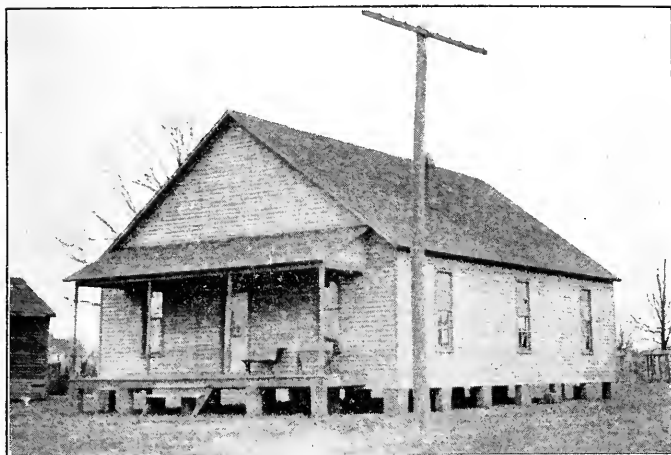
The state has tried almost every conceivable way of selecting textbooks for rural schools.<sup>1</sup> Up to 1852 selection was left to parents, in consequence of which there were almost as many textbooks in a school as there were children. Since 1852 six different methods of selection have been in vogue: (1) Between 1852 and 1873, selection by the district trustees for their respective schools from lists recommended by the state board of education; (2) from 1873 to 1893, selection by the county board of examiners and the county superintendent from lists recommended by the state board of education; (3) from 1893 to 1904, selection by the county board of examiners freed from all state restrictions; (4) from 1904 to 1910, selection by a county textbook commission from a single list agreed upon between the several county textbook commissions and a state textbook commission; (5) between 1910 and 1914, reversion to the

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<sup>1</sup>In general, the selection of textbooks for graded and city school districts has consistently remained in the hands of the respective boards of trustees or boards of education.

county textbook commission freed from all state restrictions, practically the method in vogue from 1904 to 1910; (6) since 1914 there has been a single list for all rural schools prepared by the state textbook commission.

With all these attempts, no satisfactory method has yet been devised for selecting textbooks for rural schools. There is widespread opposition to a single state compulsory list, and it is said to be a matter of common knowledge that there was corruption in the last state adoption. This zig-zag experience, capricious changing from one kind of machinery to another without genuine improvement, is fairly typical of the state's educational history. Nothing could more clearly illustrate the chaos that results from the absence of trained and continuous leadership. The problem of textbook selection is in itself not difficult. A properly constituted state board of education would, as we shall in a moment see, have as its executive officer a state superintendent. The state superintendent, in co-operation with representative educators chosen by himself, would form a textbook commission. The commission would prepare a list of textbooks, containing four or five suitable texts in each subject, fix the retail price of the same with the publishers, and present the list to the state board of education for adoption, the state board having the right to reject textbooks on the proposed list, but not to add them. Counties and cities would each, in that event, set up a similar machinery. The county superintendent or the city superintendent, as the case might be, with an ad-



Three-Window Rural Schoolhouses, Without Cloakroom, but with  
Front Porch



visory committee of county or city teachers, would make a selection from the state list and submit the list so selected to the county or city board of education for approval. This plan is peculiarly adapted to Kentucky, since it harmonizes the two methods which have so long conflicted with each other, namely, the single compulsory state list and the independent local list.

#### SUPERINTENDENT OF PUBLIC INSTRUCTION

The law of 1838 creating a state board of education provided, also, for a superintendent of public instruction, appointed by the governor for a term of two years. In 1850 the superintendent became a constitutional officer, elected by the people for four years; the constitution of 1891 prohibited his re-election.

The duties of the first state superintendents were chiefly clerical. They compiled the returns from the school census, assisted in apportioning state school funds, collected data on school enrollment and attendance, and made an annual report to the general assembly. Not until 1864 were they required to give full-time service or to maintain an office at Frankfort. In fact, nearly all the early state superintendents were ministers holding active pastorates, who gave to the schools only such time as they could spare from their religious duties.

Latterly the responsibilities of the state superintendent have been increased. The clerical work of the office has mounted by leaps and bounds. It now involves the collection and tabulation of many kinds of educational

and financial data, the answering of thousands of letters, the issuing of scores of circulars, the preparation of numerous forms and blanks, and the compilation and publication of a number of bulletins annually. The office also prepares and publishes elementary and high school courses of study, special courses for physical education, agricultural education, home economics, etc., as well as programs for special exercises, such as for Temperance Day and Thrift Day, and issues sample plans for schoolhouses.

The superintendent is required not only to supervise the accounting and expenditure of all public school funds, approve all plans for school buildings, interpret the school laws and report violations thereof, but also to supervise every phase of public school instruction, including the classification of high schools. He appoints the state board of examiners, of which he is also a member; is a member of the state textbook commission, member of the vocational education board, member of the board of trustees of the University of Kentucky, member and chairman of the boards of trustees of both the Eastern Kentucky and Western Kentucky Normal Schools, and member and chairman of the board of the Kentucky Normal and Industrial Institute.

There has been a corresponding increase in the complexity of administrative problems confronting the superintendent. The small district with its single school has given way to county, graded school, and city districts; the one-teacher school is being displaced by large con-

solidated and even larger city schools; a complex program, including science, physical education, home-making, farming, etc., has succeeded the three R's; and low local requirements for teachers' certificates have been displaced by state standards and state examinations.

The state superintendent has thus become an important officer. His responsibilities, covering in theory the entire field of public education, call for a man of high executive and administrative ability, technical training, large experience, and genuine devotion to education.

The mere recital of the state superintendent's functions and opportunities shows that he should be absolutely independent of political influences and considerations. Yet the office of state superintendent in Kentucky is to-day in partisan politics. The state superintendent is nominated on a party platform and elected by party vote. Expediency, not fitness, almost inevitably determines the nomination. The selection of a competent man is an accident. For educators of proved ability and reputation cannot be expected to stand on a party platform, to submit to party pressure, or to go through partisan elections.

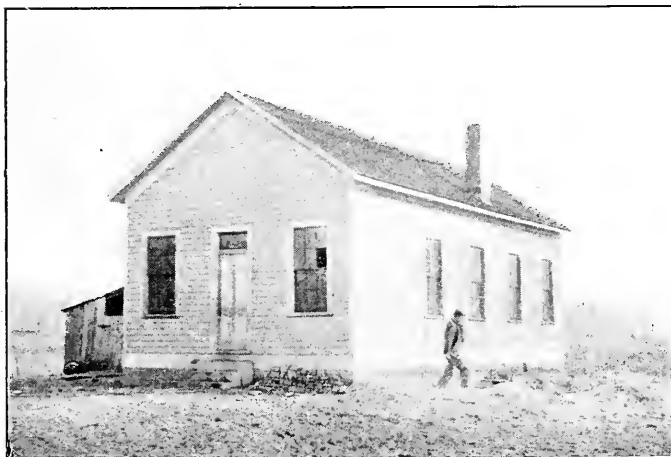
Thus nominated, the state superintendent is called upon to pay his part of the campaign expenses, to subordinate himself to the party program, to participate in the campaign, and to conduct his department with an eye to party interests. Party politics enter into the employment of janitors and clerks, and professional assistants can hardly be selected solely on the basis of

merit. Policies and plans for the improvement of the schools must fit in with the party program, and must meet the approval of party leaders.

Moreover, limitation of service to a single term of four years has various unfortunate results. It increases the difficulty of getting a competent superintendent. It makes continuity of policy impossible. It lessens the superintendent's influence both with the people and the general assembly, particularly toward the end of his term, for why should the legislature bother with propositions which will in all probability be modified or entirely discarded by the incoming official?

Finally, the state superintendent is poorly paid, and his office, located in the new capitol, lacks almost everything it needs except space and furniture. For a short period prior to 1880, the superintendent's salary was \$3,000. In 1880 this was reduced to \$2,500, and has since stood at that figure. However, in 1912 the superintendent became special school inspector, with an allowance of \$1,500, so that in his dual capacity he now receives an annual salary of \$4,000. The salary of the superintendent of public instruction in North Carolina is \$5,000; in Maryland, \$8,000; in New Jersey, \$10,000.

Between 1893 and 1906 there was no provision for paying the superintendent's expenses while visiting schools or performing any of his official duties. Even now, his traveling allowance is limited to a maximum of \$500, although he has an indefinite allowance in his capacity as special school inspector.



Four-Window Rural Schoolhouses, Without Cloakroom or Porch



As late as 1910, the clerical and professional force of the office consisted of the superintendent and three clerks, with a total payroll of \$5,850, where it had stood since 1893. In 1920, the total appropriated by the state for clerical, stenographic, and professional assistance, including the superintendent's salary, was \$19,500. Any two of a dozen of the superintendent's duties—for example, supervision of schools, inspection of school expenditures, approval of schoolhouse plans, classification of high schools, preparation of the biennial report, etc.—would, if properly performed, exhaust this entire appropriation.

With inadequate assistance and defective organization, the state superintendent is expected to direct and supervise the schools, and to have at hand in usable form reliable information about them. Accordingly, he asks annually for detailed information on enrollment, attendance, teachers' salaries, school expenditures, and other important items. The facts returned by local officers are seldom complete and often unreliable. The superintendent is unable to check and verify the returns. They are generally tabulated as they come in, and published, at great expense, without analysis or interpretation, although there is scarcely a table in the biennial report which does not omit returns from some county, graded school district, or city. To illustrate: In the report for 1917-1918, in the table on county fund distribution, data from nine counties were omitted; to fill out the table, the returns of the preceding year were used. In the same volume

the distribution of state funds for 1918-1919 is given as \$3,533,000, whereas the auditor gives it as \$4,010,000. We were unable to find in the office of the state superintendent complete or reliable information or data on a single important feature of the public schools.

A division of records and reports should be established to remedy these defects. The biennial report, almost the bulkiest published in the Union, could then be reduced to one-fourth its present size, and data of inestimable value could be collected and tabulated for the use of the department, of the general assembly, and the general public.

In 1912 a meagre provision was made for the supervision of public school expenditures. Its necessity and importance were emphasized by the many financial irregularities and census-padding activities uncovered. But it is impossible to secure competent men to carry on the work at \$1,000 a year, the maximum salary fixed by the law. Consequently, the present superintendent has appointed no assistant inspectors. Occasional inspections, however, conducted by members of the office staff, show the need to be as great as ever.

Again, the state superintendent is responsible for the educational supervision of the schools. But the state has never appropriated a dollar for educational supervision other than for the state superintendent's salary. In 1910, the superintendent then in office applied to the General Education Board. Its present annual appropriation of \$21,400 for salaries, clerical assistance, and

traveling expenses enables the superintendent to employ an inspector of high schools, two supervisors of white elementary schools, and a supervisor of colored schools. These supervisors have been invaluable. They have been leaders in every forward educational movement; they have co-operated with local school officials; and they have been missionaries in the development of popular interest in public education. There is, however, a growing demand for a new type of supervisory assistance. Counties, graded school districts, and cities require a careful study of their respective local situations, and assistance in formulating plans, covering long periods, for the improvement of their schools. To meet these new demands, an additional high school supervisor and an additional elementary school supervisor ought to be provided.

More recently, through the temporary aid of federal funds, amounting to \$6,500 annually, the department was furnished with a supervisor of health education. The response of the schools shows that this work is both needed and appreciated, and permanent arrangements should be made for its continuance. Also, the vocational education board now provides, from federal funds at an annual cost of \$7,868, the department with a director of agriculture, a supervisor of trades and industries, and a supervisor of home economics.

If further illustration were needed to emphasize the inadequate support of the superintendent's office, the following could be cited: Almost from the founding of

the public school system, the state superintendent has been required to prepare and publish suitable schoolhouse plans, and the general assembly of 1920 imposed on him the further duty of approving all plans for proposed school buildings. The full time of a school architect with proper assistance is needed if this work is to be done well, and the expenditure would be amply justified by the superior character of schoolhouse construction. Yet the general assembly has never appropriated a penny for the purpose.

Assuredly, the state superintendent is expected to "make bricks without straw." The large powers which he possesses on paper are reduced to nominal form by the dissipation of authority through various boards, by the conditions under which he is chosen to office, by the shortness of his tenure, and by the lack of an adequate staff.

#### SUMMARY

To summarize: The state now assumes responsibility for public education. But the educational machinery of the state is antiquated and inadequate. The state board of education, by reason of its makeup, is incapable of performing the functions that naturally fall to such a body. The state superintendent, whatever his character, personality, or training, is handicapped by party connections, limited tenure, and inadequate financial support. If the schools are to be effectively administered, the present *ex officio* board of education must be

replaced by a properly constituted board; the state superintendent must be taken out of partisan politics, the office must be placed on a professional basis, and its support must be made commensurate with its responsibilities and duties.

### III. LOCAL ORGANIZATION AND ADMINISTRATION

**T**HE state and the local units must co-operate if a sound educational system is to develop. The part that the state plays has already been indicated. It should set up and enforce everywhere minimum educational standards, and toward this end should contribute a reasonable amount of money raised by general taxation. The local community should show its pride and interest by pushing ahead beyond the minimum standards set up by the state. Realizing that the education of its children is the most profitable investment that can be made, the community should desire better school buildings, better trained teachers, a longer school term, more and better school supervisors than the state law actually compels. To procure these the community must tax itself beyond the required minimum; and under competent leadership it will do so, for men can readily be made to see that every dollar spent in education quickly reproduces itself many times in a vigorous and industrious people. Efficient schools require, therefore, as we have pointed out in the preceding chapter, continuous and progressive central leadership; they also require local interest, local initiative, and local sacrifices.

## COUNTY ORGANIZATION AND ADMINISTRATION

The county is at once the oldest and the newest unit of local organization, for between 1838 and 1856 a nominal form of county organization was maintained. Each county had an appointed board of school commissioners—first five, later three; but their powers and duties were inconsiderable. They were authorized to divide the county into districts; to give notice of and supervise school elections; to apply for and receive the state school funds due the county; acting with the district trustees, they originally examined the teachers, but subsequently delegated this important function to other persons. The duties were thus not enough to keep the board alive. For this, or some other reason, in 1856 the school commissioners were displaced by a single appointed commissioner, who, in 1884, became the county superintendent.

The abolition of the county board in 1856 marked the passing for the time being of the idea of central county control, and this idea did not reappear until 1908, when the county board of education was re-established. The new county board was a clumsy affair, being made up of the chairmen of the several division boards, of which there were four, six, or eight in each county.

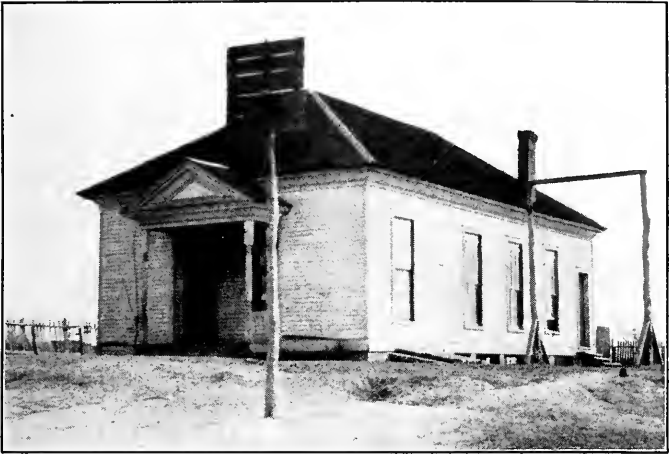
Between 1838 and 1908 the district was therefore the real rural school unit in Kentucky. The county commissioners or county superintendent divided the county into districts containing as nearly as possible 100 children of school age. Thereafter the management of the schools

was practically in the hands of the district. The district voted a school, fixed its own taxes, and elected its own trustees, who constructed the schoolhouse, employed the teacher, fixed her salary, and determined the length of the term—in short, managed the school. Many of the serious ills from which Kentucky schools have suffered grew, as we shall see, out of this district organization.

The law of 1908, which re-established the county board, was a tardy recognition of the fact that the county, not the district, must be the local rural educational unit. No system of education can be built up out of independent districts. The county is the natural unit for taxation, and while small enough to engage local interest, it is large enough to support graded schools, a county high school, supervisors, attendance officers—all the several factors that are indispensable to organized educational effort. It was therefore sound statesmanship to consolidate the separate rural districts into the county unit in charge of a county board of education.

The main duty imposed on the county board of education was the management of school finances and the school plant. Up to this time, as stated above, each district had been responsible for its own schoolhouse. Schoolhouses were sometimes built by a special district tax, sometimes by a special district poll tax, but more often by private subscription. Occasionally a district had a good school building. More often the schoolhouse was a wretched hovel, unworthy the name.

With the county board of education re-established,



Four-Window Rural Schoolhouses, with Porch, but Without Cloakroom



almost every general assembly added to its financial powers. A far-reaching expansion was the provision of the law of 1912 authorizing the county board to combine the state school and county school funds, and to distribute them to the districts according to their needs. The employment of teachers remained in the hands of district boards of trustees, but teachers were to be paid according to a salary schedule adopted by the county board of education, approved by the state board. Thus, the old method of apportioning state school funds directly to the districts was abolished. The small district was now on the same footing as the large district; teachers of equal qualifications received the same salary, and the scramble for the large district, with the large salary, which extended even to paying a premium to the trustees for a particularly large school and to political log-rolling to secure the election of a given trustee favorable to the employment of a given teacher, became a thing of the past.

The objects for which the county board might spend county school funds were at the same time multiplied. In 1912 the county board was authorized to employ rural school supervisors and to pay the necessary expenses incurred by them and the county superintendent in the performance of their official duties.<sup>1</sup> Thus, by 1920, the financial powers of the county board of education were

<sup>1</sup>In 1912 counties were also permitted to vote county bonds for the erection of schoolhouses, but thus far no county has voted such bonds. We do not include these provisions in our discussion of the county boards of education because a separate commission was authorized to handle

ample to enable them to provide a uniform and efficient system of county schools.

The re-established county board of education was also vested with certain educational responsibilities, which were gradually increased. They were required by the law of 1908 to establish at least one county high school, and authorized to prescribe rules and regulations for the management of the same, adopt a suitable course of study, employ the necessary teachers, fix their salaries, and dismiss them for cause. The law of 1908 conferred on the county board the power to change the boundaries of old subdistricts and to lay off new subdistricts; that of 1912, to consolidate subdistricts and to fill vacancies in trusteeships; and that of 1914 extended the board's authority over the entire county, since which date no new graded school districts might be formed without its approval. Thus, one by one, the county board was endowed with most of the functions properly belonging to it. But meanwhile, as has already been pointed out, the board was itself clumsily constituted, being made up of division chairmen, each naturally more interested in the division from which he came than in the county as a whole. Thus, the district spirit permeated the county organization.

This defect was corrected in 1920 by the new county unit law, one of the few pieces of constructive educational the funds derived from such county bond issues. The creation of this independent commission is a further illustration of the state's tendency to establish separate boards or commissions to perform duties that properly belong to the original board.

legislation to be found in the entire history of the state. This statute created county boards of five members, to be elected by the voters outside of graded school and city school districts. The people thus received for the first time a direct voice in the management of school affairs from the standpoint of the county as the unit. At the same time, the law of 1920 not only extended the financial powers of the county board, making special provisions for a county school budget and an increased compulsory county school tax, but also placed in its hands the entire educational management of rural schools, including the appointment of the county superintendent as its executive officer.

The first election under the new law took place in November, 1920, the new members taking office January 1, 1921. In places there naturally exists some discontent with the members chosen, and with their first important act, the selection of a county superintendent. No such change could possibly be carried through without a certain amount of dissatisfaction. The remedy lies, however, not in a change of the law—the law is based on sound and well-accepted principles—but in a wiser selection of county school board members by the people. The very exercise of the privilege will of itself tend to bring about the desired results.

#### THE COUNTY SUPERINTENDENT

The efficiency of a county system depends largely on the executive officer, the county superintendent. The

title "county superintendent" was not legally employed until 1884, although county superintendents had existed since 1856, when the single commissioner took the place of the old board of common school commissioners.

Old as this office is, it is to-day one of the weakest spots in the state public school system. The difficulty is not a lack of power. The single common school commissioner assumed all the clerical and supervisory duties of the board of commissioners which he displaced. He divided the county into districts, called for the state school funds and distributed them to the districts, received reports from district trustees, and made reports to the state superintendent; appointed one or more persons who, along with himself, issued teachers' certificates, visited schools, and advised teachers. From time to time additional responsibilities were imposed. For example, in 1870, it became his duty to decide all questions of dispute with respect to the common schools, and to organize and conduct teachers' institutes. In 1884 he was authorized to condemn unfit and insanitary schoolhouses. At this time, also, he was charged with the handling of state school funds. In 1886, he was authorized to select textbooks, sharing this responsibility, after 1893, with the county board of examiners, and between 1910 and 1914, with the county textbook commission. Though until 1920 he lacked the power to appoint and assign teachers, he was, if qualified, nevertheless in position to do effective work in many

directions. But the superintendency was a failure, and for obvious reasons.

In the first place, from the beginning the office has been intrenched in county politics. The county superintendent, always dependent on the county politicians for appointment or nomination and election, had been subject to all the ins and outs of county politics. In the second place, the salary was too meagre to attract and hold competent men. The first county superintendents received a maximum of \$100 annually, later increased to an average of about \$250. Between 1870 and 1884, the salary was further increased; but up to 1912, the maximum that might be paid was \$1,500. After 1912, the maximum was \$2,500, and the minimum \$600. Never in all the history of the state has more than one superintendent received the maximum, \$2,500; and county superintendents are now serving, and will continue to serve until December 30, 1921, for the minimum \$600 a year. The law of 1920 fixes the minimum at \$1,200, and places no limit on what a county board may pay. Of the 70 newly elected superintendents, one will receive \$4,000 a year. Above 20 per cent. will receive the minimum, \$1,200, with the average for all \$1,817. As a result of low salaries, many county superintendents have been anything but educators. They have been farmers, storekeepers, lawyers, doctors, ministers, insurance agents, blacksmiths, carpenters, dressmakers, milliners, etc.

Repeated efforts have been made to define proper

qualifications for the office, but the highest ever prescribed—two years of education beyond high school graduation—are entirely inadequate. Inadequate as they are, probably less than a third of the superintendents now in office could meet them. Of the 96 county superintendents in office in 1920-1921 reporting to us, 8 have never gone beyond the elementary school. Of the remainder,

27 have had less than a full high school course;

25 have had the equivalent of a high school course;

14 have had less than two years beyond high school;

13 have had as much as two years beyond;

2 have had three years beyond; and

7 have had the equivalent of a standard college training or more.

Doubtless all of them have through reading added to their training, and some have had experience as schoolmen; but even if full credit be given for experience and outside reading, all too many of the county superintendents are unqualified to discharge the duties of the office.

It goes without saying that county superintendents who are dependent for their positions on political favor, who participate actively in county politics, who give only part time to the schools, and who are mostly untrained, cannot be active educational leaders. Some of them are little more than office clerks, and poor ones at that. Their financial accounts are wretchedly kept; often their ledger is their checkbook stubs, and a balance is seldom struck except at the close of the school

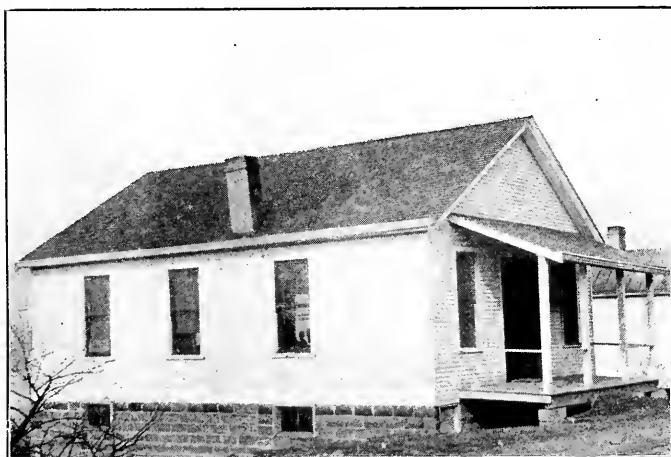
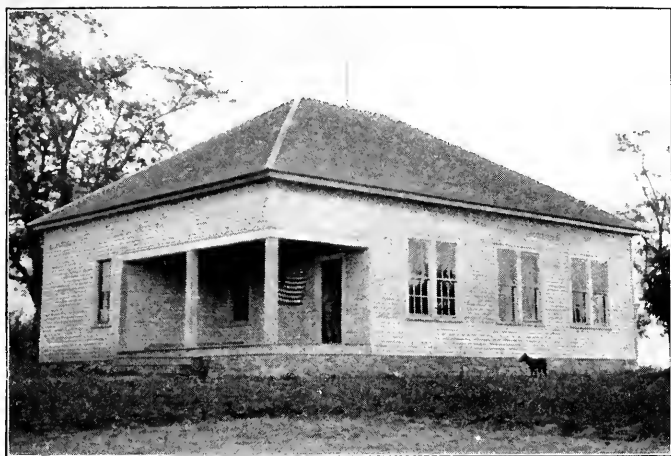
year. Irregularities in the auditing and paying of bills and in the handling of public funds are common. While the county courts are expected to audit school accounts annually, the audit is seldom more than a formality, and in one county there has been no settlement for years. Fortunately for the future, the law of 1920 requires county boards to provide annually for an outside audit and to publish the results. Further, the new account book, prepared by the state board of education, requires a monthly balance, and it is hoped that the appropriation of 1922 will enable the state superintendent to supervise adequately both the accounting and the business methods of county boards. The rapidly increasing expenditures make such supervision more imperative than ever before.

The clerical work of the office of the county superintendent is generally as poorly done as the accounting. Reports are required from teachers, but few superintendents see to it that each teacher makes all the reports required or that those made are either complete or correct. Examination has been made of hundreds of teachers' registers, which include the teacher's term record and annual report, without finding one that is both complete and correct. The superintendents' annual reports to the state superintendent are likewise usually incomplete, and rarely accurate; occasionally they are not even made at all. Even on current items of administrative importance, it is next to impossible for the state department to obtain reliable information. And

the present survey of public education has been continually hampered by the incorrectness and incompleteness of official data.

The county superintendents are not themselves altogether to blame. The offices of many are inadequate and poorly furnished. Few have ample cabinets and filing cases; not more than four or five have modern clerical and statistical devices, such as mimeographs and adding machines, and two-thirds of them are entirely without clerical assistance of any kind. Under these conditions, full information about the schools simply cannot be collected and compiled, whatever the law.

These defects in business methods, accounting, and reporting would be less serious if superintendents performed satisfactorily their administrative and supervisory duties. Though a few superintendents have recently been active in promoting consolidation, in erecting new schoolhouses, in encouraging better attendance, in engaging better teachers, and in securing larger county levies, the majority have no administrative program and exercise little administrative control. The administrative looseness in many counties is astonishing; the superintendent knows little about how the schools are conducted. Trustees dismiss teachers apparently without cause, and close the schools for the most trivial reasons. In one instance a trustee closed the school because his son was ill, and he did not want him to lose any time; therefore, other children had to wait until he was well. The teachers themselves, apparently without



One-Room Rural Schoolhouses of Somewhat More Modern Type



anyone's knowledge or authorization, also close the schools for days and weeks to do farm work, or visit, or go shopping, or rest. For example, a teacher, on securing her first pay, forthwith closed school for a week and proceeded to Lexington to do her winter shopping. Nothing at all is thought of dismissing school an hour or two earlier than the appointed time. That schools should begin and close regularly at definite hours, and that they should continue uninterruptedly throughout the term, are elementary points in administration that are disregarded at will under the happy-go-lucky, do-as-you-please régime that obtains in Kentucky.

Although schools are usually in the hands of young, inexperienced, and untrained teachers, many superintendents give little or no thought to supervision. Less than half report giving as much as one-fourth of their time to this work; a fourth give none at all. Even if they were all qualified to supervise teaching, the attitude of county boards of education toward paying expenses incurred in the performance of official duties would discourage them. A third of the county boards of education provide no expense allowance; another third make only a meagre allowance. Such conveyance as is needed (a saddle horse, horse and buggy, or automobile) must be provided by the county superintendent, who also frequently pays all of his traveling expenses.

Under the most favorable conditions a superintendent, single-handed and alone, cannot properly supervise the schools of an entire county. In every county there

should be at the very least one additional person who spends all her time in helping teachers, especially young teachers, to organize their schools, to classify, grade, and teach their pupils. One county now has two special supervisors of physical education; another, two special supervisors of cooking and sewing; eleven have each a colored supervisor for colored schools; but there is not a single regular white rural supervisor in the entire state.

The law of 1912 authorized county boards of education to employ rural school supervisors. The next year the state superintendent reported 49 rural supervisors at work, and predicted the early extension of supervision to all the counties. The persons so employed, however, were seldom especially trained, few county superintendents were sufficiently equipped to appreciate, select, or direct a good supervisor, and, in consequence, the whole enterprise quickly fell into disrepute.

Some counties are now attempting its revival through attendance officers. Attendance officers who have had teaching or family experience can help young teachers in discipline and management, but they have neither the time nor, ordinarily, the training to do supervisory work of the amount and kind needed. To rely on attendance officers for supervisory direction would therefore be a grave mistake. The work can be entrusted only to skilled persons, specially trained, if solid results are to be obtained.

The law of 1920 removed the office of county superintendent from politics, placing his selection in the hands

of the county board of education. But time must pass before results appear. Most of the county superintendents holding office have been reappointed by the new county boards of education. In many instances this was not only the wise thing to do, but it was all that could be done. Yet in a number of counties the boards had the money and the power to go out of the county and even out of the state for superintendents, but failed to take advantage of the opportunity. Trained Kentuckians in number qualified for the office are not available, and neither Kentuckians nor qualified persons outside of the state will be available until the new law is appreciated by the people and its spirit carried out by county boards of education.

#### GRADED COMMON SCHOOL DISTRICTS

We have said that two educational divisions are not included in the county unit, viz., the graded common school district and the city school system. The state now has 314 white and 2 colored graded school districts, each with its own board of trustees, acting independently of the county board of education.

Graded school districts are as old as the public schools themselves. Louisville, Lexington, and Maysville were recognized as such by the organic law of 1838. Prior to 1888 graded school districts operated either under the same laws as ordinary school districts, or received special charters from the general assembly. Since 1888 the school laws have contained a separate chapter dealing

with their organization and administration, which sets them off from the ordinary district; a few, however, still cling to their special charters.

Up to 1888 only one general provision was imposed on towns or villages desiring to organize as graded districts. They were expected to establish and maintain common schools adequate to teach all children of the district, free of charge. After 1888 a town or village was required to vote a maximum local school tax, first of 70 cents, later of 50 cents. From time to time other requirements have been imposed. For example, since 1893, the petition to the county court for an election to decide on the formation of a graded district has had to be endorsed by the trustees of the ordinary districts affected and by the county superintendent, and since 1914 such petition must be approved by both the county board of education and the county superintendent. Again, in 1893, the size of graded districts was restricted to two and one-half miles in all directions from the proposed school site, and since 1914 such districts must contain at least 100 census pupils. The county district law of 1908 contained still other restrictions, and since 1916 graded school districts have been required to maintain a high school equal to that maintained by the county board or to pay the tuition of its pupils in an approved high school elsewhere.

These regulations are well enough in themselves, but no penalty has ever been imposed for violating them, nor any means provided for returning to the county a

graded school district which fails to carry out the conditions in question.<sup>1</sup> To illustrate: A district votes the required local school tax, but for years at a time no local school tax is levied, and, however dire the need, the maximum may never be levied. Doubtless all graded school districts contained 100 census pupils when organized, but the state now has 63 that no longer contain the requisite minimum. The obligations of graded school districts to provide high school opportunities are clear; but there are 52 that make no such provision. In short, once organized, the graded school district becomes a law unto itself.

As suggested, graded school districts not only vary in size, but in the character of the schools maintained. They range in size as follows:

- 10 employ one teacher;
- 77 employ two teachers;
- 63 employ three teachers;
- 52 employ four teachers;
- 34 employ five teachers;
- 26 employ six teachers;
- 54 employ seven or more teachers.

In the larger graded school districts, those employing seven or more teachers, there is generally much to commend. Most of these have good school buildings and

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<sup>1</sup> Such districts, with the approval of the county board of education and the county superintendent, may vote to return themselves to the county, but there is no other authority with power to put them back into the county.

grounds, employ fairly well-trained principals, on salaries ranging from \$1,500 to \$2,500, and maintain not only well-graded elementary schools, but four-year high schools, with a nine or ten months' term. The educational interest in certain of these districts is admirable. For example, when, in 1920, it was supposed that such districts were authorized by law to levy a maximum tax of \$1.25, a number forthwith levied the maximum, and in a few, although the law was later declared invalid, the maximum, by common consent of the taxpayers, was collected.

On the other hand, probably nowhere else in the entire public school system of the state, all things considered, are educational conditions quite so bad as in the small graded school districts. Sometimes the school term is only six months long; the schoolhouses are mostly ramshackle, tumble-down, dirty, wooden structures; not infrequently the teachers hold no certificates at all, are no better prepared than the ordinary rural teacher, and are sometimes paid less. A local school tax may or may not be levied, and, when levied, the sheriff may hold it in his own hands for as much as two years. Cases are known where the collector has not made a settlement within five years. Evidence of petty graft, inefficiency, and the free play of personal and partisan interests abounds. If there is any reason, other than to avoid taxation, for the existence of most of these small graded districts, it is certainly not apparent.

The administration of the graded school districts in the

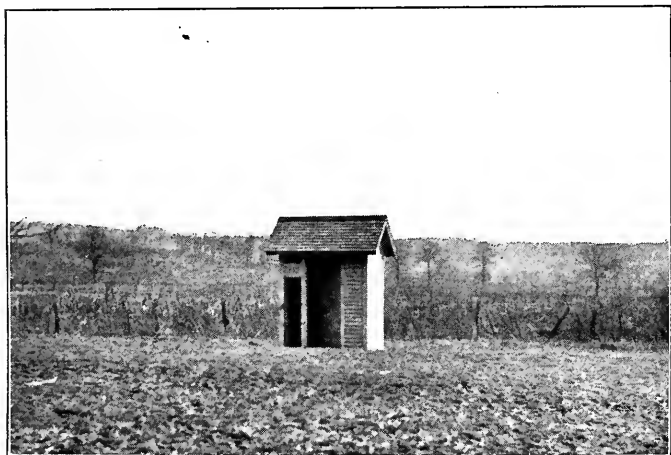
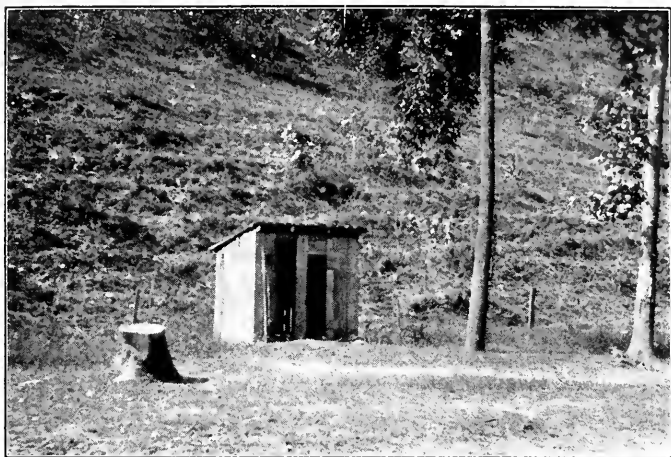
coal-producing counties calls for special comment. The coal companies appear friendly toward public education, enter actively into their management, and seem to be doing a good deal more for the schools than the law requires. But the arrangements are not infrequently of a paternalistic character. For example, a coal company builds and pays for the schoolhouse, and either rents or gives it rent-free to the board of trustees. If the funds available are not adequate for current maintenance, the company makes up the deficit. The company thus keeps itself before the community as a patron, and appears to be doing more than its bare duty to the community. In many cases, however, if the usual tax was levied, the community could do all these things—and more—for itself. Besides, it would own and control its own school plant; the school patrons would be accustomed to paying school taxes, and the community would have a self-respect impossible so long as it is the beneficiary of a corporation. In some places the law is plainly ignored. To illustrate: In certain districts no school tax is levied; the coal companies, without authority of law, hold out a certain amount monthly from the wages of the miners, which, along with what the companies donate, goes to support the school. The companies lead the communities to believe that they are expending on the schools far more than their ordinary school taxes, whereas in some instances they are saving hundreds, perhaps thousands, of dollars annually. Needless to say, this sort of thing should be stopped.

The difficulty of supervising 316 graded school districts is obvious. They have, all told, more than one thousand trustees, 316 collectors, and 316 treasurers. Scattered, as they are, over all parts of the state, even the inspection of the accounts of these 316 boards, to say nothing of supervising their business methods and administrative practices, is an impossible task. Casual inspections, however, have revealed diverse irregularities and the probable loss annually of thousands of dollars of public money.

Nor is there any adequate local administration outside of the larger districts, for only the very largest can afford to employ competent superintendents. The school principal usually teaches full time and is responsible, besides, for the discipline and management of the school; but he has neither time nor capacity to handle the financial affairs of the district. The board of trustees attends to these in its own way, without help or suggestion from any source.

The difficulty of properly administering these 316 separate and independent graded districts would in itself be sufficient reason for bringing them back into the county system, but there are other substantial reasons for so doing.

Prior to the enactment in 1908 of the county school district laws it was well enough for towns and villages to form themselves into graded districts. In fact, it was a distinct advantage to have them do so, as it encouraged local initiative. But the creation of the county



Typical Rural School Outhouses



unit, with a county board of education with large educational and financial powers, and particularly the imposition of a compulsory county school tax, entirely change the situation. Under these conditions graded school districts and a county school system are contradictory. A fully developed county system excludes the possibility of graded districts, and, conversely, the existence of graded districts impairs the county system.

Again, the imposition of a compulsory county school tax raises a fundamental question with respect to exempting graded districts from county school taxes. So long as there was no county school tax, it was well enough to allow graded districts to levy and enjoy a local tax. But this is not the whole story. Graded districts have extended their boundaries up and down railways and in and around every possible bit of valuable personal and corporate property, so that, exempt as they are from the county school tax, they enjoy the sole benefits of property which can scarcely be said to belong merely to them. In fact, most of the graded districts would not have been established had it not been for this opportunity. As the compulsory county school tax does not touch property included in the graded district, a considerable part of the taxable property of each county is not subject to county tax. The following is a representative situation. A county has six graded districts, which receive all the proceeds of taxation from two-thirds of all the railways; in these six districts there is concentrated, including the

railroads, almost one-half of all the taxable wealth of the county, but only one-third of all the school children. For the county outside the graded districts to produce per pupil the same amount of money for school purposes, the school tax rate in the county would have to be twice as great as the rate in the graded districts. Under these conditions, equality of educational opportunities is impossible. Naturally, there is a widespread and rapidly developing feeling that graded districts ought not to be exempted from the county school tax, and this feeling is justified.

There is a further inherent injustice to the rural sections in the existence of graded districts. With two exceptions, they include only schools for white children; the responsibility for colored schools in villages and towns is thrown on the county. To be sure, the local tax levied for white schools is levied only on the property of whites, but the question is not, *Where is the tax levied?*, but who pays it. It is generally agreed that all taxes are ultimately paid by the consumers; hence, a Negro who rents a house owned by a white man contributes to the taxes on white property. Even the tax levied on corporate wealth within the graded school district has only recently been shared with the colored schools.

Again, the original reason for establishing graded school districts has, in a number of counties, practically disappeared, and it is hoped will disappear in all parts of the state in the near future. When no rural schools ran more than six months, it was an advantage if even a

single district provided a longer term. But there are now some twelve counties that have a school term of more than six months, and other counties are moving in the same direction. Henceforth, not this or that graded district, but the entire county should extend its term, when conditions are ripe for such action.

Finally, so far as possible, the one-teacher rural school should be abolished, to be replaced by larger union or consolidated schools. Most of the graded school districts comprise towns and villages that are natural consolidation centers. So long as they exist independently of the county system, they are stumbling blocks to consolidation. Consolidation may be effected under the joint control of graded district trustees and county boards of education, but this method results in divided responsibility, endless complication, and frequent injustice to one or the other party.

We are, therefore, of the opinion that all graded districts should so far as possible be converted into consolidated schools and returned to the county system. To do so will wipe out certain outstanding injustices, will add to the dignity and strength of the county system, and at the same time will be to the advantage of the graded school districts themselves. As things now stand, neither the county nor the separate districts can support a proper organization. By pooling resources a strong superintendent and a well-trained professional staff can be more easily provided. And through proper consolidation, the educational facilities of many graded school districts,

as well as of the county as a whole, will be greatly strengthened.

Even when graded districts are restored to the county, the largest may still maintain a degree of local autonomy. They might be permitted to retain their local board of trustees; also, they might levy an additional local school tax to be expended, subject to mutual agreement between the respective trustees and the county board of education, for local purposes, such as lengthening the school term, employing better trained teachers, providing educational equipment, play-grounds, athletic fields, etc.

#### CITY SCHOOL DISTRICTS

The remaining local unit of organization and administration is the city school district. These are of four types, comprising, respectively, cities of the first class, of which there is 1; cities of the second class, of which there are 4; cities of the third class, of which there are 8; and cities of the fourth class, of which there are 46.

City schools were operated prior to 1893 either under graded district school laws or under special charters, mostly the latter. The adoption of the new constitution of 1891 gave opportunity to systematize city school legislation, and separate codes for each class of cities were enacted in 1893. These separate city codes have been amended from time to time, so that as they now stand few states possess better city school legislation than Kentucky.

The four separate city codes closely resemble one an-



Two- and Three-Room Rural Schoolhouses of the Older Type



other. They provide for small boards of education, elected by the people on secret and non-partisan ballots. These boards have both financial and educational control of the schools, with power to appoint the necessary agents, such as superintendents, business managers, principals, teachers, etc. With the exception of Louisville, they are independent of municipal authorities in school finance, having power to request or to levy school taxes up to a specified maximum, and all are authorized to submit to the people the question of issuing bonds, within constitutional limitations, for the purchase of school grounds and the erection of school buildings.

Such differences as exist are, for the most part, of minor importance. For example, in first and second class cities the boards of education are composed of five members; in third class cities, of nine members; and in fourth class cities, of six members. In Louisville, the only city of the first class, the board of education has no taxing power, no power to fix the school tax or to compel the levy by the city council. The council must levy for schools not less than 36 cents and not more than \$1.00 per hundred, but between these two extremes the rate is in the discretion of the council and not of the board of education. In cities of the second, third, and fourth class the board of education has the taxing power. In second class cities, the tax is limited to 65 cents; in third class cities, to \$1.00, including a poll tax not exceeding \$1.50; and in fourth class cities, to \$1.50, including a poll tax not exceeding \$2.00.

Other parts of the school system have been seriously hindered by constitutional limitations and poor laws—for example, the state department of education and the counties—but this cannot be said of the cities, at least in recent years. In consequence, the towns educationally approximate towns of equal size elsewhere. Nevertheless, defects are serious, as they are generally throughout the country. Too often boards of education, rather than trained superintendents, still run the schools; personal favoritism still plays too large a part in the employment of teachers; and financial support is generally inadequate to provide suitable grounds and buildings, skilled administrators, well-trained teachers, qualified supervisors, attendance officers, school doctors and nurses. Help cannot, however, be obtained by radical changes in the city school laws; an enlightened and active public sentiment, and a deeper appreciation of the scope and value of public education are requisite.

A few minor changes might, however, be made to advantage. For example, it would simplify the school laws and add to the ease of administration if the four separate school codes, so similar in general outline, were combined into a single code, applicable to all cities. Thus minor differences could be eliminated; the powers and duties that properly belong to a board could be more clearly distinguished from those properly belonging to the superintendent of schools as its executive officer. The relative position of superintendent and business manager could also be soundly adjusted. As the law for

first and second class cities now stands, the business manager is co-ordinate with the superintendent; he should, we believe, for the sake of harmony and efficiency, be subordinate to the superintendent and subject to his direction. While the maximum tax rate should probably not be uniform for all cities, that for first and second class cities should be considerably increased, and the school boards in first class cities should be made independent of the city council in school finance.

Whether or not a single city school code is adopted, certain other needed changes should undoubtedly be brought about through general legislation. For example, cities that still possess special charters should surrender them; likewise, the provision in the code for fourth class cities which permits of two boards of education, one for white schools and one for colored schools, should be repealed in the interest of unity, efficiency, and justice.

There is also a fundamental question that should be carefully considered. Cities, like graded school districts, are now free from the county school tax. Cities represent an extreme concentration of wealth, in the production of which the county shares. They are not independent in respect to taxation for other purposes; they pay county taxes for county roads, county courts, penal and eleemosynary institutions.

#### IV. TEACHERS

GOOD schools are impossible without good teachers, and good teachers are the product of training and experience.

There were in service in 1920-1921, 13,653 teachers, divided as follows: city, 2,708; graded district, 1,345; and rural, 9,600. Of these, 12,146 are elementary and 1,507 are high school teachers.

##### TRAINING OF WHITE TEACHERS

A teacher's certificate indicates in a general way the extent of her training and competency. The lowest grade state certificate now issued requires an education that goes somewhat beyond the elementary school, but less than high school graduation. Of all rural and graded school teachers in service in 1920-1921, 84 per cent. of the white and 65 per cent. of the colored held this lowest grade state certificate, or county certificates of similar rank.<sup>1</sup> It can therefore be safely affirmed that a large majority of the teachers of Kentucky are poorly educated and not professionally trained.

We have detailed information on the education and

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<sup>1</sup>The several cities—first, second, third, and fourth class—certificate their own teachers, so that city certificates cannot be grouped with state certificates.

training of 11,712 of the 13,653 teachers, or 86 per cent. of the total number. Conclusions based on returns from so large a proportion will hold approximately true for the entire teaching body.

On the basis of our returns, only one elementary teacher in ten is satisfactorily prepared to teach in an elementary school, that is, has graduated from high school and has had at least two years of additional special training. As might be expected, a greater proportion of city than of rural elementary teachers are satisfactorily trained. Forty per cent. of the elementary teachers in cities have had a satisfactory training, as compared with 8 per cent. in graded school districts, and 3 per cent. in the counties.

Nor does the state possess a considerable body of even fairly well trained elementary teachers. In fact, 63 per cent. of all the elementary teachers of Kentucky have had less than a full high school training, and 23 per cent. have never gone beyond the elementary school. The bulk of these very poorly trained teachers are in the rural schools, where 77 per cent. have had less than a full high school course, and 30 per cent. have themselves never advanced beyond the elementary school. (See Table I, Appendix.)

Conditions in the high schools are somewhat better. At that, only slightly more than one high school teacher in four is satisfactorily prepared to give high school instruction. (See Table II, Appendix.) Again, cities are better supplied than the counties, for 41 per cent. of

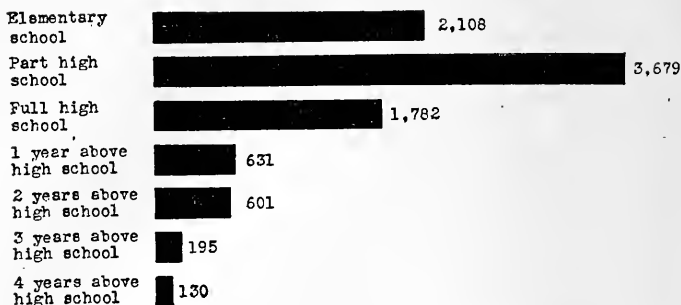


Figure 1. Preparation of White Elementary Teachers

city high school teachers have satisfactory training, as compared with 14 per cent. in graded school districts and 10 per cent. in rural districts. Twenty-one per cent. of all high school teachers, and in rural sections 35 per cent., have not themselves enjoyed the equivalent of a high school education.

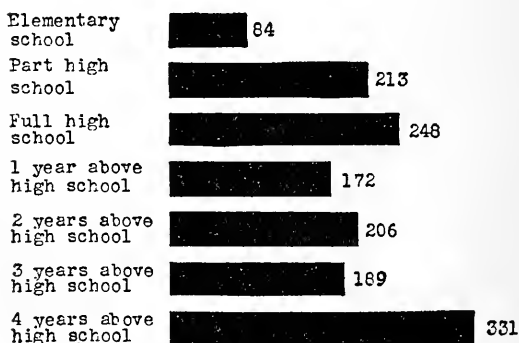


Figure 2. Preparation of White High School Teachers.

## TRAINING OF COLORED TEACHERS

All things considered, colored teachers make a commendable showing. A third of them have had two years or more of training beyond a high school course. (See Table III, Appendix.) City colored teachers are better prepared than rural colored teachers. In the cities 53 per cent. have advanced two years or more beyond high school, whereas in rural sections only 18 per cent. have advanced so far.

## TEACHERS' SALARIES

Low salaries, a defective certification system, a lack of supervision and inadequate teacher-training institutions account for Kentucky's poorly trained teachers.

The salaries paid Kentucky teachers have always been close to the lowest paid in the United States. The average was, for

1900, \$215;

1910, \$337;

1918, \$364.

Up to 1912 teachers were left to wring from school boards whatever they could. The state, however, came to the assistance of rural elementary teachers in 1912, when a minimum wage of \$35 a month was set, with a maximum of \$70 a month, for a six months' term. In 1918 the minimum was raised to \$45 and in 1920 to \$75, with no maximum specified. But even now the wage paid the best prepared rural elementary teachers rarely

exceeds \$100 per month. On the other hand, 40 counties are unable to pay the \$75 minimum. The maximum in these 40 counties is around \$65. While, therefore, a few rural elementary teachers are now paid around \$100 per month, approximately 84 per cent. receive only between \$65 and \$75 per month for from six to eight months a year.

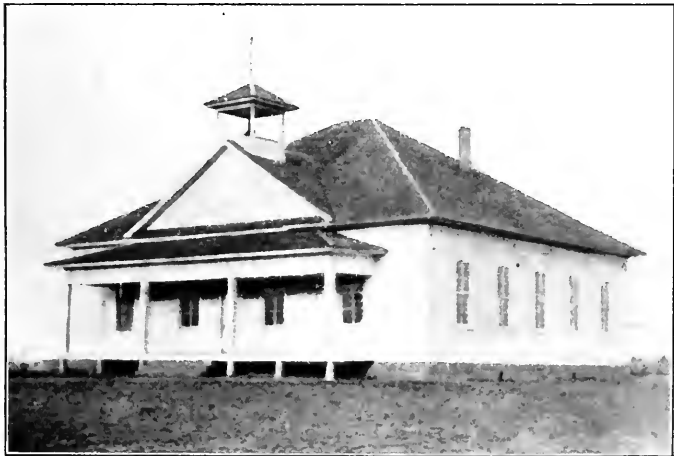
Graded districts and especially cities pay elementary teachers a better annual if not a higher monthly wage than the counties. But rarely outside of Louisville does an elementary teacher receive as much as \$1,000 per year; the great majority get between \$700 and \$800 a year.

High school teachers are paid more than elementary teachers; the average high school salary for 1920-1921 was \$1,278.

So long as such low salaries prevail, particularly in the rural sections, young men and women will not prepare themselves thoroughly for teaching. Unless the wages for well-trained teachers are materially advanced, Kentucky's schools will continue to be in the hands of teachers who know little more than the brighter children in school, and teachers will continue to teach only until they can find something else to do.

#### CERTIFICATION SYSTEM

The certification system now in use does not encourage young people to get professional training. In the first place, there never has been any clear recognition that



Old-Style Rural Schoolhouses, with Two or More Rooms



different kinds of school work—for example, teaching in the elementary school and teaching in high school—call for different kinds of training. Almost all certificates thus far issued, except those of the lowest grade, have been valid in both elementary and high schools. To illustrate: The state board of education may grant to a graduate of a standard college, who has taken as a part of his college course a specified amount of professional high school work, an advanced high school certificate. On the other hand, the state normal schools may grant to an eighth grade graduate, without any high school training, who has completed a fifty weeks' course specially adapted to teaching in the elementary schools, an elementary certificate which is likewise valid in high schools. The college graduate and the fifty-week normal school student may teach side by side in the same high school.

In the second place, there has never been any definite relation between the training required and the grade and validity of the certificate granted. For example, a state teacher's certificate presupposes scholarship equivalent to the completion of a four-year high school course, and is valid in all public schools. On the other hand, a state teacher's diploma presupposes scholarship equivalent to the completion of two years of college work, and is likewise valid in all public schools. Thus, these two years of additional preparation apparently count for nothing. The teacher who has had two years of college work does not rank above the one who has advanced no

further than the high school. Why should he seek the higher training?

In the third place, there is even now only the slightest relation between the training required and the salary paid. For example, in the teachers' salary schedule for 1920-1921, the following certificates, which presuppose far different amounts of training, call, within any one county, for the same monthly wage:

| <i>Certificate</i>          | <i>Years of Training Pre-supposed</i>            |
|-----------------------------|--|
| State Teacher's Certificate | Equivalent of high school course                 |
| Intermediate Normal         | One hundred weeks above elementary school        |
| Advanced Normal             | One hundred-eighty weeks above elementary school |
| Elementary University       | One year above high school                       |
| Intermediate University     | Two years above high school                      |
| Elementary High School      | Full college course                              |

Thus, as far as salary schedule goes, the teacher who has taken the trouble and spent the money to get a college education gets the same remuneration as the one who has had only one hundred weeks of schooling above the elementary school.

Long-standing and widespread corruption in the issuing of certificates has also done much to discourage honest

preparation. In the past, county superintendents, acting through county boards of examiners, have at times granted certificates without discrimination in direct or indirect payment for political services. The evils surrounding the issuance of county certificates were, however, largely done away with in 1920, when the authority formerly exercised by county boards of examiners was concentrated in the state board of examiners.

But Kentucky will not have a sound certification system until the fifty or sixty other certificating authorities, including cities and public and private institutions, are abolished, and the sole power of granting certificates—city, graded school, and county—is vested in the state board of education. Cities should be encouraged to require of their teachers qualifications higher than those imposed by the state, but at the same time all city teachers should hold *state* certificates. Such state certificates would be mostly issued on credentials. Likewise, to deprive public and private institutions of their present powers to certificate their respective students does not mean that such students would be compelled to take examinations. In general, students of all standard institutions offering approved teacher-training courses would be granted the appropriate certificate on presentation of credentials showing the amount and kind of work completed. Thus to centralize certificating authority will do away with existing confusion and will set up a single standard for certificates of a given kind and grade.

Under a sound certification system, different kinds and

grades of certificates will be issued for different kinds of school work; and each kind and grade of certificate will be linked with a distinct prescribed salary. Thus, the certificate will vary with the training, and the salary will correspond to the certificate. All kinds and grades of certificates requiring the same length of preparation will call for the same salary. Salaries will be so graduated that the least well prepared and least experienced teacher will receive the lowest salary, and the best prepared and most experienced, the highest salary. A certification system based on these two principles not only recognizes preparation and experience, but rewards them. Teachers are thus encouraged to prepare themselves and to continue to teach, if for no other reason than that they may claim the higher wage.

#### TEACHER-TRAINING INSTITUTIONS

Despite low wages and an inferior certification system, the state would now have a larger body of well-trained teachers had it at an early date provided properly for teacher-training institutions.

#### DEPARTMENT OF EDUCATION, STATE UNIVERSITY

Apart from an ineffective effort in 1856 to establish a normal school in connection with Transylvania College, and another unsuccessful attempt in connection with the Kentucky Military Institute in 1878, Kentucky did nothing for the training of teachers until 1880, when a normal department was added to the University of Ken-

tucky. Up to this time public school teachers depended for their training on the colleges, academies, and particularly on private normal schools which sprang up in different parts of the state around some strong personality, flourished for a time and died. Sixteen of these private normal schools were active when the state in 1880 undertook the professional training of teachers.

From the beginning the normal school established at the University of Kentucky offered advanced instruction, and in 1893 courses were outlined leading to the degree of bachelor of pedagogy. The state's conception at this time of its responsibility for the training of teachers was, however, very narrow, for it limited the number of students with free tuition to five from any one county.

The normal department was dropped in 1908, and in its stead there was established a department of education of collegiate rank. The department is supported from the general funds of the university, with the exception of Smith-Hughes work, for which the university receives an allotment from the state vocational education board. The total Smith-Hughes expenditure in 1920-1921 was \$27,000.

The department is administratively a part of the college of arts and sciences. Students in education are therefore not registered separately, nor has the department, except for teachers of agriculture and home economics, outlined courses in education for high school teachers, principals, superintendents, etc., such as are outlined in business administration, social service, geology,

and journalism. Students completing one year's work are granted an elementary university certificate, two years' work, an intermediate university certificate, and three years' work, an advanced university certificate—each valid in both elementary and high schools. The total enrollment in the department in 1920-1921 was 274. Eight students received degrees in education, 8 in agriculture, and 12 in home economics.

The number graduating from the department has never been large. In fact, the total number of state university graduates now teaching in the public schools is probably less than 100, and the total number having had some work at the university but not graduating is less than 400. Slight as this contribution to the teaching staff is, no other institution in the state even approaches this record.

The development of the department is clearly limited to the number of students entering the university for other than technical courses, such as engineering or agriculture. But with the development of the university the number of such students will increase, and a sound certification system will do something to increase the number desiring to prepare for teaching.

#### EASTERN AND WESTERN STATE NORMAL SCHOOLS

The two white state normal schools established in 1906 are twin institutions. Each is governed by its own board of regents, consisting of the superintendent of public instruction as chairman and four members ap-

pointed by the governor for terms of four years. Over each is also a subordinate governing body, the normal school executive council, consisting of the state superintendent and the presidents of the two schools. Since 1918 each school has derived about \$125,000 annually from a mill tax of five-eighths of one cent for current support and the erection of buildings; they have also each received additional appropriations of approximately \$305,000 for permanent improvements. Each occupies the campus of an abandoned college; their plants are therefore partly old and partly new. The value of the plant of the Western Normal is now estimated at \$546,000, and that of the Eastern at \$748,000. The schools are open annually for forty-eight weeks—four regular terms of ten weeks each and a summer term of eight weeks. The courses of study are similar, consisting of an elementary certificate course, an intermediate certificate course, and an advanced certificate course; though, as we shall point out later, the Western Normal offers a greater variety of advanced courses than the Eastern. The enrollment of the Western Normal for the entire year has run as high as 2,000, and that of the Eastern as high as 1,500. The Western Normal has graduated from its advanced course, including the year 1921, 677 students, and the Eastern Normal, 519 students.

The value of these institutions to the public schools can scarcely be overestimated. Their administration has been practically free from politics, and they have served the state faithfully and well. The state's greatest need

for many years to come, if its educational system is to rest on a sound foundation, is well-trained elementary teachers. The policies of these two normal schools ought, therefore, at this time to be carefully examined in view of the state's needs and their appropriate functions.

Conditions existing at the time the normal schools were established compelled them to give both normal school and high school instruction, and to build up their courses around teachers' certificates of low grade.

When conditions are favorable to the effective training of teachers, only high school graduates are admitted to normal schools. In 1906, when Kentucky normal schools were established, only the cities and the more progressive towns had high schools; in fact, there was at that time not a standard rural high school in the state. The great majority of the students entering the normal schools were therefore without home high school opportunities, and few indeed were high school graduates. To meet these conditions and to give their students the necessary preparatory training, the normal schools were compelled to give a considerable amount of strictly high school instruction. Even now, Kentucky high schools are not all that they should be, but high school opportunities have so multiplied as to relieve the normal schools to a considerable extent of this obligation, and the state should no longer look to them to do high school work.

Again, when Kentucky normal schools were established, professional training was little appreciated, and



Newer Type of Rural Schoolhouses, with Two or More Rooms



state and county standards for teachers' certificates were extremely low. Accordingly, the normal schools were compelled to build up their courses around certificates of low academic and professional requirements. The result is that the normal schools have developed three relatively distinct and poorly organized courses—an elementary certificate course, requiring 50 weeks of attendance above the elementary school; an intermediate certificate course, requiring 100 weeks of attendance above the elementary school; and an advanced certificate course, requiring 180 weeks of attendance above the elementary school. Only the adoption by the state of a certification system with appropriate academic and professional standards will enable the normal schools to develop proper courses, controlled alone by the needs of well-trained teachers.

Present requirements for graduation from the advanced course are, for students entering directly from the elementary school, from a half to a year short of what they should be. For example, an elementary school graduate can finish the advanced course in four and a half years of 40 weeks each. Normal school students can probably do more in a given time than high school students, for the average age of students entering the normal schools for the first time is about nineteen years, which is approximately the average age of the freshmen entering the state university. But normal school students can hardly cover in four and a half years of 40 weeks each the ground between the elementary school

and the sophomore year in college, or six years of school work. The shortest time in which normal school students can cover this field is probably five years of 40 weeks each. If the state is to have elementary teachers of standard training, these schools should further raise their standards, at least for pupils entering from the elementary school, if not also for high school graduates.

Low state and county standards for certificates also largely explain why the normal schools are able to hold so relatively few students until they complete the advanced course. The great bulk of their work now is and always has been with students taking a preparatory course to complete the eighth grade, and with students of eighth grade attainments who are taking the elementary certificate course. To illustrate: The total enrollment of the Western Normal School for 1920-1921 was approximately 2,000 students; nevertheless, the enrollment as of April 1, 1921, was only 951 students. Forty-eight (48) of these were disabled soldiers; the remainder were distributed as follows:

Elementary course, which requires elementary graduation for entrance, 557

Intermediate course, which requires 50 weeks beyond elementary school for entrance, 126

Advanced course, which requires 100 weeks beyond elementary school for entrance, 220

The same relative distribution among courses prevails at the Eastern Normal School. Notwithstanding these large total annual enrollments, the Western Normal

School graduated in 1921 only 79 students, and the Eastern Normal School, only 35 students.

Finally, both schools have recently undertaken to train high school teachers. The Western Normal School in particular emphasizes this feature. It has developed within the last few years a number of specialized high school courses, corresponding in their requirements to the advanced elementary course, and is now offering full college courses in a number of studies, such as Latin and mathematics. The Western Normal has, however, only 465 students qualified to take advantage of these electives, of whom approximately three-fourths are occupied with elementary work. Should normal schools, originally created to train elementary teachers, and still inadequate to supply the need, even when working at full capacity, undertake the training of high school teachers?

In the summer of 1921, the state superintendent organized, through the extension divisions of the Eastern and Western Normal Schools, 67 county training schools for teachers. These are six-week schools, usually located at a county seat, which offer to teachers instruction particularly in the common school subjects, and in methods of teaching and school management. The expense was borne by the teachers, who paid a tuition fee of \$10 for the six weeks' term, and by appropriations from county and city boards of education. Attendance was voluntary, yet 3,700 teachers enrolled, which speaks volumes for their loyalty and seriousness. At the same time, as

an indirect result of establishing county summer schools, the attendance at all state normal schools was greatly increased, so that altogether 7,000 Kentucky teachers were in summer school in 1920-1921. County teacher-training schools have under existing conditions proved a valuable part of the teacher-training facilities of other states, and undoubtedly are calculated to render a great service at this time in Kentucky.

How inadequate is the supply of trained teachers coming from state institutions is revealed by the following facts. To say nothing of the number required to fill new positions, our high schools need annually not less than 130 trained teachers merely to take the place of those dropping out. In 1920-1921 the state university prepared 28, and of these only 8 were looking forward to usual high school instruction, the others having specialized in agriculture and home economics. Similarly, to take the place of the elementary teachers who drop out there is need annually of approximately 1,450 teachers. To supply this demand, the Western and Eastern Normal Schools together graduated, in 1920-1921, 114; and approximately half of these do not expect to teach in the elementary school.

#### TRAINING INSTITUTIONS FOR COLORED TEACHERS

The State Normal and Industrial Institute, established in 1886 and located at Frankfort, is the older of the two state institutions for training colored teachers. It is managed by a board of trustees, consisting of the state



Consolidated Rural Schoolhouses of Better Type



superintendent, as chairman, and three other members appointed by the governor, with the approval of the senate, for terms of three years.

The institution was established for the purpose of training Negro teachers for the common schools, but in 1890 departments of agriculture, mechanics, and domestic economy were organized; more recently there have been added courses in vocational agriculture and trades, to meet the requirements of the Smith-Hughes act.

The majority of the students, who usually number about 400, exclusive of the summer school, have always been and are now enrolled in the normal department. The normal school work proper is based on an intermediate course of two years; which covers the seventh and eighth grades, and on a preparatory high school course of three years. The normal school course itself covers three years, and is a queer mixture of advanced high school instruction and normal school work, including practice teaching. About 30 students complete the course annually; they compare favorably with the graduates of similar institutions elsewhere.

The West Kentucky Industrial College, located at Paducah, became a state institution in 1918, when the state appropriated \$3,000 for annual maintenance and \$5,000 for buildings. (See picture opposite page 186.) In 1920 the appropriation for maintenance was increased to \$5,000 annually, and \$10,000 was appropriated for permanent improvements for the biennial period 1921-1922. The board of trustees consists of the president of

the college, the county superintendent of McCracken County, and three others appointed by the governor for terms of two years. The school enjoys the same certifying powers as other state normal schools, and up to date has issued 4 elementary certificates, 15 intermediate certificates, and 4 advanced certificates. Although the West Kentucky Industrial College is to be counted among the state's resources for the training of Negro teachers, the Frankfort school is the only state institution even fairly well equipped to train teachers.

Altogether there are now available annually about 30 well-trained colored teachers, whereas approximately 75 are needed each year to take the place of those who leave the system.

## V. BUILDINGS, GROUNDS, AND EQUIPMENT

**G**OOD schoolhouses, adequate school grounds, and appropriate physical and educational equipment are essential to a good school. If classrooms are dark and dirty, poorly ventilated, and irregularly heated, if the sanitary arrangements and toilet facilities are unwholesome, and if the school is without facilities for physical training, play, and athletics, children are bound to suffer physically. There is, moreover, a close relation between physical welfare and mental, not to say, moral, vigor. An attractive environment develops respect for property, hygienic habits, modesty, and orderliness.

For purposes of description, Kentucky schoolhouses may be grouped into rural, graded district, and city schoolhouses.

### RURAL SCHOOLHOUSES

Of the 8,070 rural and graded district schoolhouses of the state, 50 per cent. have been erected since 1908. During this period the problems of schoolhouse construction have been more or less widely discussed, and the importance of proper construction and arrangement has been repeatedly emphasized. It might, therefore, be expected that rural schoolhouses—at least those erected

within the last decade—would meet modern requirements.

The great majority of rural schoolhouses—approximately nine out of ten—are one-room, box-like structures, essentially alike from the mountains to the Mississippi, and from the Ohio to Tennessee. These box-like structures have, in the main, a single classroom; cloak-rooms are rarely provided, and additional rooms for manual training, cooking, agriculture, or for fuel, almost never. They vary in size, number of windows, and in having or not having porches; but in all essential respects, they are alike and almost all bad. (For illustrations, see opposite pages 4, 8, 16, 20, 28 and 36.)

If there is a really modern one-room structure in the state, it did not come under our observation in the course of inspection tours through two-thirds of the counties.

Only a few one-room rural schoolhouses have foundations; most of them rest on stone pillars without other underpinning. The biting winter blasts are thus free to sweep under the schoolhouse and up through the thin floor into the classroom to the discomfort of the teacher and children.

Approximately 50 per cent. of these schoolhouses are painted and in fair repair. The common color is white, which is very attractive against the usual background of green. The other half have in most instances never had even an initial coat of paint, and are in ill repair. The roofs leak, the weather-boarding is off here and

there, doors are broken, knobs gone, window panes out, walls stained, floors uneven and cracked, seats broken and out of place, and a pall of dust over all. These neglected schoolhouses teach eloquently the doctrine of shiftlessness, disorder, and indifference. Their silent lessons will undoubtedly be reproduced in the home, on the farm, in the factory and store. Such neglect and lack of care would not be tolerated by any business organization.

All rural schoolhouses except the very oldest are ceiled. The favorite ceiling is wood, which is occasionally painted, sometimes papered, but more often left unfinished. Even when decoration is attempted, some outlandish color is used, such as indigo blue, rather than cream for the ceiling and light and dark buff for the side walls. Since there is usually no cloakroom, the children's wraps are hung on the side walls—an unsightly as well as unwholesome practice.

An upright Burnside stove furnishes heat, the fire being started by the first person who reaches school, whether pupil or teacher. As the margin before opening is slight, time is necessarily lost in waiting for the children to warm up. The stove usually stands in the center or front center of the room. In cold weather this method of heating almost demoralizes the school. Although it is not difficult to do, apparently rural teachers have not learned how to build a fire in these stoves so as to produce a uniform and continuous heat. Constant use is made of "flash" fires—kindling is piled in, coal

thrown on top, and all drafts opened. The fire roars, the stove is soon red hot from top to base, and the children nearby bake. Thereupon the windows are thrown open, the stove door opened, the fire dies down, and the room cools to the point of discomfort. During the course of a single day, this process is repeated again and again. Under these conditions, it is not surprising that almost every affliction known to children visits rural schools, closing them for weeks at a time, nor is it surprising that in inclement weather little school work is done, for the children are continuously on the move from one part of the room to another, either to get warm, or to cool off, amid indescribable confusion and disorder.

If rural schools need one thing more than another, it is some form of heater that will guarantee proper ventilation and uniform heat conditions. Even if the comfort of the children is totally disregarded, the loss of school time from unnecessary sickness and from the interruption of school work, resulting from the use of the old-fashioned stove, must in a single year greatly exceed the cost of such a heater.

With few exceptions, one-room rural schools are equipped with double patent desks, usually of three sizes, and occasionally with single patent desks. They are also furnished with a teacher's desk and chair, and with some sort of bookcase. A galvanized bucket with a common drinking cup almost invariably takes the place of a sanitary drinking fountain; lavatory facilities are nonexistent. The blackboard usually consists of the front

wall and a few side wall spaces painted black, and is, as a rule, useless because of wear. In a few counties, each school has in addition to the above equipment, a globe, maps of the world, of the United States, and of Kentucky, and a number of charts for reading, physiology, etc.; now and then also, special chairs and work tables for beginners.

Rural teachers are their own janitors. Most counties make a pretense of providing floor oil or sweeping powder, but as the teacher is generally expected to carry the cleansing material from the county seat to the school, all too frequently it never arrives. Sweeping is usually done at the noon hour, the older girls helping. The health of the children does not count as against the teacher's desire to leave as quickly as possible after the close of school.

Under these conditions, it is gratifying to find, as one occasionally does, a neat and well-kept schoolhouse. But, of course, most of them are bound to be dirty. They will continue to be dirty so long as teachers are required to take care of them. The janitor work in rural schools should be a county expense. If for practical reasons it is necessary for the teacher to care for the schoolhouse, she should be paid for doing it, and the pay should be in addition to her salary as teacher.

Coal is the common fuel, but a coal house is rarely found except in the Bluegrass and in a few of the western counties. About half of the rural schools have wells or cisterns; at the other half, water is carried from a nearby

spring or well. In the mountain counties toilets are practically unknown. In other sections there are usually two at each school—one for boys and one for girls—but they are often badly located and in ill repair. (See illustrations opposite page 44.) Girls' toilets are generally clean; boys' toilets are filthy and offensive beyond belief. In only one county are there uniformly sanitary closets.

Rural school grounds are invariably small. In some sections the mountainous character of the country renders difficult the acquisition of good-sized, level school grounds, but in many instances school sites have been chosen because the ground was worthless for other purposes. Consequently, many scarcely afford level space enough even for the schoolhouse. Some of the grounds are picturesque and dotted with beautiful native trees; but most of them are barren, rough, and unimproved. Occasionally an enterprising teacher helps the children with some play apparatus, and lays out a basket ball court, but ordinarily there is neither playground nor play apparatus.

Had the one-room rural schoolhouses built since 1908 been constructed with proper regard to lighting, heating, ventilation, sanitary arrangements, and educational requirements, they would have served for many years to come. As it is, they are so poor and frail that the investment in them, recent though it be, is an almost total loss. Perhaps this initial waste was unavoidable. Prior to 1908, the district was responsible for its schoolhouse;



Athletic Field, Consolidated Rural School



Teachers' Home, Consolidated Rural School



but thousands of districts evaded their responsibility. Accordingly, when, in 1908, the county became responsible for all rural schoolhouses, it became necessary to rebuild almost the entire rural school plant. In many counties this was literally done. With so much to do in so short a time, the funds available were not sufficient to pay for modern structures. In one sense, however, the perishable and unsatisfactory form of construction may prove a blessing in disguise—for well-built one-room schoolhouses might have proved an obstacle to consolidation. As conditions now are, new schoolhouses will have to be built, and it will be better to consolidate them than to replace the one-room school.

Besides these one-room rural buildings, there are one or more two-, three-, and even four-room schoolhouses in almost every county of the state. Most of these larger rural schoolhouses were formerly one-room structures, to which one or more rooms, generally without cloak-rooms, have been added. The new rooms are small, badly lighted, and, what is worse, so placed as frequently to impair the lighting of the original room. (See illustrations opposite page 48.)

A second type comprises schoolhouses originally constructed with two or more rooms, generally with cloak-rooms. In most instances such schoolhouses are but old-type one-room structures placed end to end or side by side, with an entrance hall near the center. (See illustrations opposite page 56.) More recently some two- and three-room schoolhouses of a more modern

type, though by no means fully modern, have been erected. (See illustrations opposite page 64.) Yet, whatever the type, the equipment and the grounds of these larger rural schoolhouses differ little from the equipment and grounds of the one-room school.

The latest type of rural structure is the consolidated school, constructed within the last four or five years. The best of them are of brick, and provide the usual classrooms, science laboratories, and auditorium. Few, however, have ample cloakrooms, and none inside lavatories and toilets. They are fairly well equipped with physical and educational apparatus, have rather ample grounds, including demonstration farm and athletic field, and the largest have teachers' homes. (See illustrations opposite pages 68 and 76.) Even the smaller consolidated schools are brick or stucco, but they are not so well planned, or so well equipped, having, as a rule, no demonstration farm, athletic field, or teachers' home. (See illustrations opposite page 84.)

These consolidated schools, representing the high-water mark of rural interest, are an indication of what will probably become general within the next decade. Unfortunately, few of them, whether large or small, are well planned. The lower illustration opposite page 68 is probably the best of all the consolidated structures and is a creditable building; but in most instances, whether because of a lack of knowledge or interest on the part of the architect and the county superintendent, local opposition, or lack of funds, even the new consoli-

dated school buildings fail to meet present-day standards.

#### GRADED DISTRICT SCHOOLHOUSES

In the smaller graded school districts, the building situation is similar to that in the rural sections. The two- and three-room schoolhouses were in most cases originally one-room buildings, to which one or more rooms have been attached, and are neither better nor worse than the corresponding type of rural schoolhouse. (See illustrations opposite page 56.) They are similarly heated, equally poor in equipment, and without satisfactory playgrounds. As in the rural districts, the janitor work is usually done by the teachers, and in the same inefficient manner. There are, however, in these smaller graded school districts a few modern buildings similar to the best in the rural sections. (See illustrations opposite page 64.)

A second type, to be found in the larger graded school districts, is the big, rambling, frame structure. (See illustrations opposite page 90.) These buildings present no points of superiority over the one-room rural schoolhouse. They are frequently dirtier, certainly noisier, and in many cases involve a serious fire hazard.

A third type is the old, prison-style, brick structure, which violates every principle of lighting, ventilation, heating, and sanitation. (See illustrations opposite page 94.) While some of them are picturesquely located, they almost invariably lack adequate playgrounds.

Only a few of the larger graded school districts have anything approaching modern structures. Their best buildings provide classrooms, laboratories, and auditoriums, and now and then inside lavatories and toilets. They are fairly well equipped, have playgrounds, and in some instances demonstration farms. (See illustrations opposite page 108.) Such schools reflect great credit upon the respective communities, and furnish a model that ought to be widely imitated.

Out of the 316 graded school districts, there are probably not more than twenty that possess satisfactory school facilities. The others have insanitary, unhygienic structures which would be condemned, if the state board of education imposed reasonable standards upon the independent districts.

#### CITY SCHOOLHOUSES

Of city school buildings, 40 per cent. are old structures erected prior to 1890. They are, as a rule, inadequately lighted and ventilated, mostly heated by steam or hot air, but occasionally by individual stoves. They constitute an extreme fire hazard by reason of their size, their height, the narrowness of corridor and stairway, and lack of fireproof construction. The classrooms are usually without cloakrooms, and only now and then is there an auditorium. In most of them cheap water toilets have been installed. Many of these old buildings are unfit for school use, and should be replaced as soon as possible. (See illustrations opposite page 114.)

A second group, including buildings erected between 1890 and 1910, mark only a slight improvement over their predecessors. Though they will of necessity have to be used for some years, yet, ignoring as they do all considerations of health and physical development, they cannot be said to be adequate for present needs. (See illustrations opposite page 120.)

The newer city school buildings, erected mainly since 1910, may be divided into two classes: First, those in which a partially successful effort was made to construct well-planned and well-arranged schoolhouses, with the result that the buildings are modern in some respects, and in other respects no better than the older structures, the lighting in particular in most of them being extremely poor. (See illustrations opposite page 128.) In the second group are buildings that compare favorably with the best elsewhere. The lighting is good, they are heated by steam, artificially ventilated, provided with the usual classrooms, cloakrooms, laboratories, and workshops, generally with auditorium and gymnasium, and occasionally with swimming pools. (See illustrations opposite pages 136 and 144.)

The buildings of the cities were erected mostly before the value of free play and athletics was appreciated, and so are without adequate grounds. Certain cities (for example, Louisville and Hopkinsville) are making considerable sacrifices to provide their newer structures with plenty of play space, but in most of the cities costly modern structures are still being built on inadequate space.

## COLORED SCHOOL BUILDINGS

Thus far we have discussed only school buildings for white children. A word will suffice for the colored schools.

In the rural sections there is little difference between the buildings for white children and those for colored children, though the buildings for colored children are, as a rule, slightly inferior to those for white children. Yet some of the best one-room rural buildings—these include the new Rosenwald schools—are for colored children. (See illustrations opposite page 160.)

It is in the graded school districts and in the cities that the greatest disparity is noted. In Louisville, Hopkinsville, Lexington, and Paducah, there are a few well-built Negro schools (see illustrations opposite page 176); elsewhere, colored children are generally housed in dilapidated frame buildings of the type to be seen in the illustration opposite page 90, or in old-type brick structures, such as are shown opposite page 94. These colored school buildings are not only dilapidated, unhygienic, and insanitary, but they are excessively crowded. In most cities there is imperative need of a complete new school plant for colored children.

## SUMMARY

The schoolhouse situation for the entire state may be summarized as follows:

The entire rural school plant, with the exception of a

few small rural schoolhouses recently constructed and the new consolidated schools, needs to be rebuilt. In the Bluegrass sections, in the western counties, and here and there in the mountain regions, one-room rural schoolhouses should be displaced by consolidated schools. Where it is necessary to maintain one-room schools, as will always be the case in the mountain and in a number of the Knob counties, the present shacks should be replaced as rapidly as possible by modern structures, well lighted, heated, and ventilated, containing not only the usual classroom, but also cloakrooms, a small room for cooking, a small room for agriculture and manual training, and sanitary lavatory and toilet facilities. There should also be a well, a coal shed, and a horse shed.

The grounds of most rural schools, whether one-teacher schools or consolidated schools, and of most graded school and city school districts should be enlarged and improved. The grounds of one-teacher schools should be ample for free play and agricultural demonstration beds; those of all rural consolidated and graded district schools should also provide an athletic field large enough for base-ball, foot-ball, tennis and other sports. Each separate city should have its playgrounds and there should be one or more centrally located athletic fields for common use.

In the graded school districts, whether these continue to be independent or are brought under the control of the county board of education, the schoolhouses, with hardly a score of exceptions, are totally inadequate both for

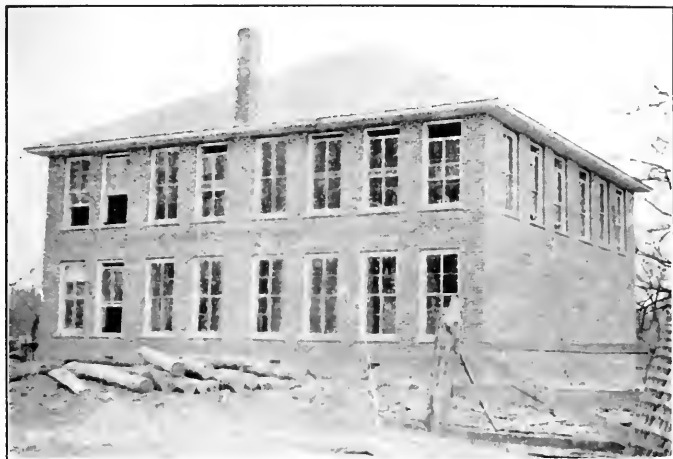
white and colored children, and need complete reconstruction.

Finally, the cities need to have a large part of their old buildings replaced, and in most instances completely new facilities for colored children.

The schoolhouse situation is thus extremely bad. Surely education in cleanliness, orderliness, respect for property, modesty, physical well-being, and hygienic living is an essential part of the school's task; yet the great majority of the children of the state, both white and colored, are housed year after year in structures that themselves violate every maxim that education should directly and indirectly impress upon the child.

Nor is the educational loss the only loss suffered. For within the last twenty years Kentucky has also lost through poor schoolhouse planning and construction probably the greater part of \$10,000,000.

The authorities have not been unaware of these conditions. Repeated efforts have been made to improve them. As early as 1845, the state superintendent was required to provide local authorities with appropriate schoolhouse plans. Obedient to this requirement, which is still in force, the state superintendent issues such plans at intervals. In 1898 the county superintendents were required to approve all building plans; and in 1920, the approval of the state superintendent was required. But these provisions have been utterly ineffective. The approval of an untrained and unassisted county superintendent is a meaningless formality; and almost equally



Consolidated Rural Schoolhouses of Poorer Type



empty is the approval of a state superintendent who has at his disposal neither expert advice nor supervisory aid. The situation will not be adequately met until the state department of education is equipped to prepare schoolhouse plans and to supervise schoolhouse construction. Such a division would cost about \$10,000 a year. Would Kentucky lose or gain in the long run, if, at an expenditure of \$10,000 a year, it could protect the investment of millions in substantial school buildings?

## VI. THE ELEMENTARY SCHOOL TERM AND COURSE OF STUDY

LET us pause for a moment to review school conditions in Kentucky, as far as we have now uncovered them.

We have found that the state board, as at present constituted, does not function and cannot possibly function; that the state superintendent, politically chosen and without adequate staff or funds, cannot, if he would, conceive and pursue a far-reaching scheme of educational development; that the county superintendents, mostly untrained, usually lack expert aid of any kind; that the teachers are mostly untrained and underpaid; and that the two great normal schools are graduating annually only a small body of well-trained elementary teachers; that many school buildings are unfit to house school children. We are in position to guess the quality of education which the school children of Kentucky receive under these untoward conditions; but we have not even yet exhausted their enumeration.

### LENGTH OF TERM IN RURAL SCHOOLS

The little that an untrained teacher might accomplish under these unfavorable conditions is still further re-

duced by the shortness of the rural school term and the defects of the rural school course of study.

The length of term in graded and city schools compares favorably with the length of term in villages and cities elsewhere. As a rule, graded and city schools are in session for nine months, though a few of the smaller cities have eight months, and some of the smaller graded school districts six or seven. A school year of nine months is generally accepted as satisfactory.

Contrast conditions in the rural schools, attended by 441,440 out of 646,559, or 68 per cent., of the children of school age. The rural term, with exceptions to be pointed out later, is six months in length; not, however, six calendar months, but six months of twenty school days, or 120 school days in all. From this is to be subtracted, generally, five days taken out for institute work by the teachers, and two legal holidays, so that the actual rural school term is approximately 113 days. This inadequate school term places rural children at a great disadvantage as compared with their less numerous contemporaries in city and graded districts. For example, in the graded and city school districts children have, as a rule, during the eight years of the elementary course a total of 72 months of schooling, whereas rural children have ordinarily only 48 months. Working under this handicap, county children must either do one third more work in a given period than graded and city school children, or take twelve instead of eight years to complete the elementary school program. Few rural children are able

to remain in school so long, and few are able to do more in a given period than their graded school and city cousins. The result is that rural school children are actually receiving on the average even less than two-thirds as much elementary education as graded and city school children.

Aware of this injustice, the legislature in 1914 provided that the common school term should be extended from six to seven months whenever the superintendent of public instruction declared a per capita from the common school fund of not less than \$4.75 for each child of school age, and that the term should be extended to eight months whenever the per capita distribution declared was over \$5.35. The per capita distribution has not been less than \$4.75 since 1916, but somehow or other the common school term was not extended.

Again, in 1918 the general assembly provided for the extension of the common school term to seven or eight months "when the resources of the school fund or contributions by local taxation or donations shall justify such extension." Though the per capita distribution for 1920 and 1921 was \$6.10, the common school term has not been generally extended, partly because the cost of education simultaneously increased, partly because the law failed to require local authorities to raise their part of the needed funds. It is, however, gratifying to report that 12 counties<sup>1</sup> have themselves extended the

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<sup>1</sup>Boone, Campbell, Kenton, Mason, Henderson, Jefferson, Robertson, Washington, Fayette, Woodford, Clark, Union. There may be still others, but these are all that our returns show.

rural term to seven, eight, or nine months, the cost being borne entirely by local taxation. Twenty-three (23) other counties,<sup>1</sup> though unwilling or unable to bear the entire burden from taxation, are encouraging local districts to extend the school term, partly through taxation and partly through subscription. In mining sections the entire cost is generally borne by one or more corporations.

The cost of a longer rural school term is a serious question for many counties. This problem will be considered when we come to deal with school finance. But it is not simply a question of money; "the children," we are told, "are needed on the farm." At times this may be true, and the compulsory attendance laws should to some extent recognize seasonal needs. But the counties that already operate the longer term prove beyond all doubt that Kentucky farmers, like farmers in other states, can keep their children regularly at school throughout the longer school year, and that they will do so if the right sort of school is provided.

#### ATTENDANCE IN RURAL SCHOOLS

Irregularity of attendance also affects the results achieved by the rural schools. An attendance of 59 per cent. for 1918-1919, and of 71 per cent. in 1920-1921, is almost prohibitive of good school work. An attend-

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<sup>1</sup>Bracken, Bullitt, Carlisle, Davies, Fulton, Grayson, Harlan, Henry, Hickman, Hopkins, Lee, Letcher, McCreary, Marion, Marshall, Montgomery, Nelson, Owen, Perry, Pulaski, Shelby, Spencer, and Todd.

ance of 71 per cent. means that on the average more than half the children are absent more than half the time, and therefore receive less than 60 days of instruction annually. Even these 60 days are not continuous, as children are in school today, out tomorrow, in school this week, and out of school the next. For example, in November and early December, 1920, "B" was in school eight days, out three, in two, out two, in one, out five, in two, out three, and then dropped out altogether.

When attendance is 71 per cent. for the year, it does not necessarily run 71 per cent. for each of the months of the year. It varies from month to month, for example, as follows:

| AVERAGE ATTENDANCE<br>IN 1920-21 DURING: | SCHOOL<br>A | SCHOOL<br>B | SCHOOL C<br>(COLORED) |
|--|-------------|-------------|-----------------------|
| July                                     | 83%         | 80%         | 78%                   |
| August                                   | 71          | 81          | 66                    |
| September                                | 66          | 68          | 55                    |
| October                                  | 44          | 59          | 47                    |
| November                                 | 11          | 36          | 45                    |
| December                                 | 23          | 27          | 16                    |

In each of these instances, attendance in the first one or two months is good, and this is generally true for the state, but thereafter it decreases month by month so that by the end of the school term it has fallen very low. When attendance runs low (for example, 40 per cent.) the difficulty that the teacher faces can be readily appreciated



Large Frame Schoolhouses of Graded School Districts



from the following table, which shows the distribution of attendance for a school month of 19 days in 1920 and an enrollment of 34 children:

| NUMBER OF PUPILS | NUMBER OF DAYS ATTENDED |
|------------------|-------------------------|
| 3                | 19                      |
| 2                | 18                      |
| 1                | 17                      |
| 2                | 16                      |
| 2                | 15                      |
| 1                | 14                      |
| 2                | 13                      |
| 2                | 10                      |
| 3                | 9                       |
| 1                | 8                       |
| 1                | 7                       |
| 2                | 6                       |
| 1                | 2                       |
| 1                | 1                       |
| 10               | 0                       |

That is, 3 pupils attended school 19 days, 2 attended 18 days, 2 attended 10 days, and 10 out of the 34 enrolled did not attend at all!

The question of better attendance has been recently agitated. The first compulsory school law, passed in 1896, required all children between the ages of seven and fourteen to attend school at least eight weeks continuously during the school term. But no provisions were made for its enforcement through attendance officers.

School trustees were expected to enforce the law, which, of course, they seldom did or could.

From time to time since 1896, the compulsory attendance laws both for rural and city districts have been improved. The cities and graded school districts have had a good law since 1910; in 1920 a new, but loosely drawn, county law was enacted. It fixed no age limits between which rural children must attend school, and it failed to stipulate the maximum fine to be imposed for violations. Nevertheless, this law, right in principle though defective in details, has demonstrated two things: First, country people will send their children to school if they think they have to do so. For example, the average daily attendance in rural schools increased from 59 per cent. in 1917-1918 to 71 per cent. in 1920-1921. Second, the operation of the law reveals the weakness of county and magisterial courts as enforcement agencies. County judges and magistrates are so intimately connected with local affairs, and under so many personal obligations, that they cannot be relied on to prosecute their neighbors for failure to send their children to school. Weak as the county and magisterial courts are as enforcement agencies, it is nevertheless probably necessary to use them.

#### MONTHS SCHOOLS ARE OPEN

There is still another factor which affects unfavorably the achievements of rural schools.

Kentucky rural schools generally begin early in July and are over by the first of the new year. Road condi-

tions are more favorable to good attendance in these months than in any other months of the year, but July and August are unfortunately the hottest months of the year—outside the mountains, frequently so hot that it is next to impossible for days at a time to do good school work. The mountain sections offer a peculiar problem by reason of the poor roads; but outside of the mountains, road conditions are scarcely worse in Kentucky than in neighboring states, and there is no reason why the schools should be open in July and August. In counties which have extended the term to eight or nine months, the schools usually open in September and close the first of May or June. All things considered, the attendance in these schools is as good in the winter months as in the early fall and late spring months. However, if a school term of eight or nine months were provided in the mountain regions, it would probably be necessary, on account of road conditions, to have schools open in July, as now, run through December, open again the first of April, and close late in June.

#### RURAL SCHOOL COURSE OF STUDY

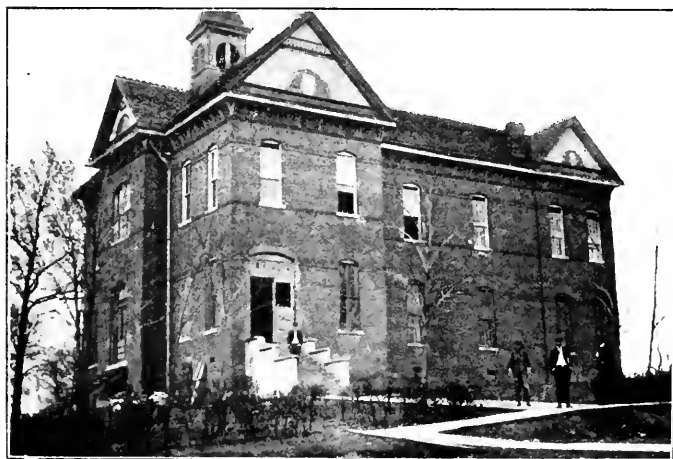
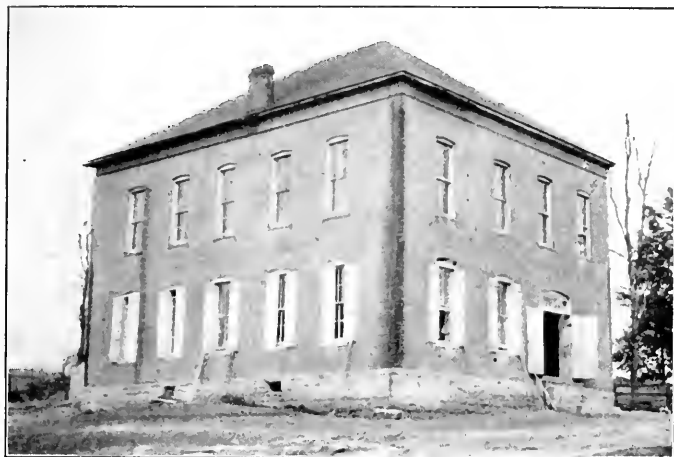
Rural schools, particularly the one-teacher schools, are further embarrassed by their extended and complicated program of studies. In early days, common school instruction was confined almost exclusively to reading, writing, and arithmetic. In fact, as late as 1852 it was not permissible to go beyond the elements of a "plain education in English, including grammar, arithmetic, and

geography." History was added in 1864, and after 1865 other languages and sciences might be taught. In 1884 physiology and hygiene were added, civil government in 1889, history of Kentucky in 1893, elementary agriculture in 1918, and physical education in 1920; so that the program of the common school, according to the law, now consists of:

|                 |                        |
|-----------------|------------------------|
| Spelling        | Geography              |
| Reading         | United States history  |
| Writing         | Kentucky history       |
| Arithmetic      | Physiology and hygiene |
| English grammar | Civil government       |
| Composition     | Agriculture            |
|                 | Physical education     |

Besides the above, the elementary course of study includes certain special subjects, recently added. In 1918, for example, one day each year was set apart for teaching temperance; in 1920 a half hour a week was dedicated to teaching "kindness and justice to, and humane treatment and protection of, animals and birds, and the important part they play in the economy of nature." It was also provided in that year that fifteen minutes per week should be given to teaching thrift and industry.

The elementary course of study has thus grown from year to year, and will probably continue to grow. The state board of education has already added nature study, music, and drawing in the course it prescribes. The burden of carrying such a program, heavy for graded and



Old-Style Brick Schoolhouses of Graded School Districts



city school teachers, who seldom instruct more than two different grades, is absurd and impossible in rural schools, where in nine schools out of ten one teacher teaches all eight grades. Let us stop for a moment to visualize this educational situation: A young, untrained, and undirected teacher holds school during 113 days out of 365; her school includes children from six to sixteen years of age; they are divided into not less than seven classes and attend with distracting irregularity; she is somehow expected, nevertheless, to teach to every age group in these seven unstable classes a half dozen to a dozen different subjects!

To make matters worse, the present course of study outlines for the six months' school about the same amount as is prescribed for the graded and city schools, which are in session from eight to ten months. This means one of two things: Either rural children must be carried hurriedly along if the prescribed work is to be covered, or the teacher, failing in this, follows her own ideas of what should be attempted. Obviously, the rural school must have a simplified program adapted to rural needs. There should be fewer studies, the subject matter should be reduced to the minimum essentials, better organized, and taught more interestingly and thoroughly.

#### GRADED AND CITY SCHOOLS

Graded and city schools suffer under some, but not all, of the handicaps affecting rural schools. Their school year is usually of reasonable length. They can classify

their pupils more easily according to achievement, and can usually provide a separate teacher for each grade; in many instances they are also able to departmentalize instruction from the sixth grade on; that is, to assign one teacher to reading, another to arithmetic, another to geography, history, etc., each one teaching pupils of several grades in her special subject.

Graded and city school districts are, however, like rural schools, handicapped by poor attendance. The attendance in these schools in the elementary grades should approximate 90 per cent. As a matter of fact, during the year 1920-1921 graded school district attendance was only 75 per cent., and city school attendance, 76 per cent.—an extremely poor showing.

Graded and city schools are also in some cases handicapped, particularly in the lower grades, by a short school day. In most graded school districts and cities the school day is, as is customary elsewhere, six hours in length, with an hour or a little more for lunch. But some graded and city schools have a day, particularly for the first three grades, that permits of scarcely more than four hours for instruction, and this in a single long session. The children come to school at eight-thirty, and remain until one o'clock, with a short recess for a quick lunch. In so short a school day it is impossible to meet the requirements of modern primary work. The result is that hundreds of children are retarded in the lower grades, and even when they are advanced they are often poorly prepared to do the work of the next classes. Graded and

city school districts should be required by law to have a school day of not less than five and a half or six hours. The work cannot be done in shorter time.

#### SUMMARY

Thus, the conditions under which rural schools work preclude satisfactory results. Even when other conditions have been improved—when the teachers are better trained and better supervised, and better facilities have been provided—children cannot be satisfactorily taught until the school term is extended to nine months, until rural school attendance is greatly improved, and until a simplified program, adapted to rural conditions, is prescribed. Nor will results ever be satisfactory in many graded school districts and cities, until there is better attendance and a longer school day.

## VII. PUPIL PROGRESS AND INSTRUCTION

UP TO this point we have been engaged in describing the schools of Kentucky. Let us now consider their efficiency.

There are two common ways of measuring the efficiency of schools: First, by ascertaining how many of the enrolled pupils complete the course; second, by ascertaining through tests and examinations how much the pupils know and what they can do at the end of the complete elementary school course. We shall use both methods in order to appraise the public schools of Kentucky.

### GRADES COMPLETED

To find how long Kentucky children remain in school and how far they advance in the course of instruction, information with respect to ages of pupils and the grades in which they were studying was obtained from 47 cities, 222 graded districts, and 9 counties. These returns indicate that almost all the pupils remain in school until they are fourteen years of age. Thereafter pupils drop out rapidly and by the time they are fifteen nearly one-third of them have left school. Rural and city schools do about equally well. (See Figure 3.)

But rural school children are not as far advanced in the school course as are city school children of the same age.

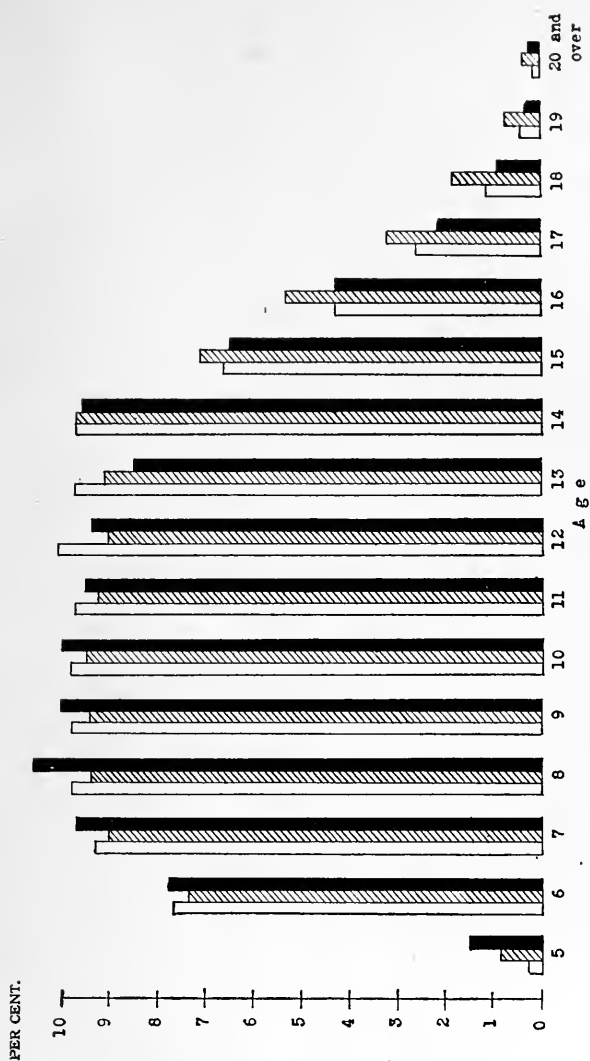


Figure 3. Pupils in rural, graded district, and city schools, distributed on a percentage basis by ages. White columns represent city pupils; shaded columns, graded district pupils; and black columns, rural pupils.

It is generally agreed that pupils should begin the first grade when they are between six and seven years of age, and advance a grade each year so that they will enter the eighth grade when they are between thirteen and fourteen years old.

When this standard is applied to Kentucky pupils, it is found that 47 per cent. of those in the city schools, 53 per cent. of those in the graded districts, and 59 per cent. of those in the rural schools are too old for their grades. Conditions, especially in rural schools, are even worse than the bare percentages indicate. For, of the 9,067 rural school pupils reported behind their proper grades, 9 per cent. are four or more years behind, 11 per cent. are three years behind, 19 per cent., two years behind, 27 per cent., one year behind, and 34 per cent. less than one year behind. The corresponding percentages in the same order for city school pupils are 4, 6, 14, 27, and 49. Obviously city school children fare much better than country children. (See Table IV, Appendix.)

The full effect of the failure of pupils to advance regularly through the course of instruction is shown in Figure 4. In this figure pupils who were between thirteen and fourteen years old when they entered school in the fall of 1920 are distributed by the grades they entered. If these children had begun school when between six and seven years old and had then advanced a grade each year, all of them in 1920 should have been in the eighth grade. As it is, only 12 per cent. of the rural children of these ages are in the eighth or any higher grade.

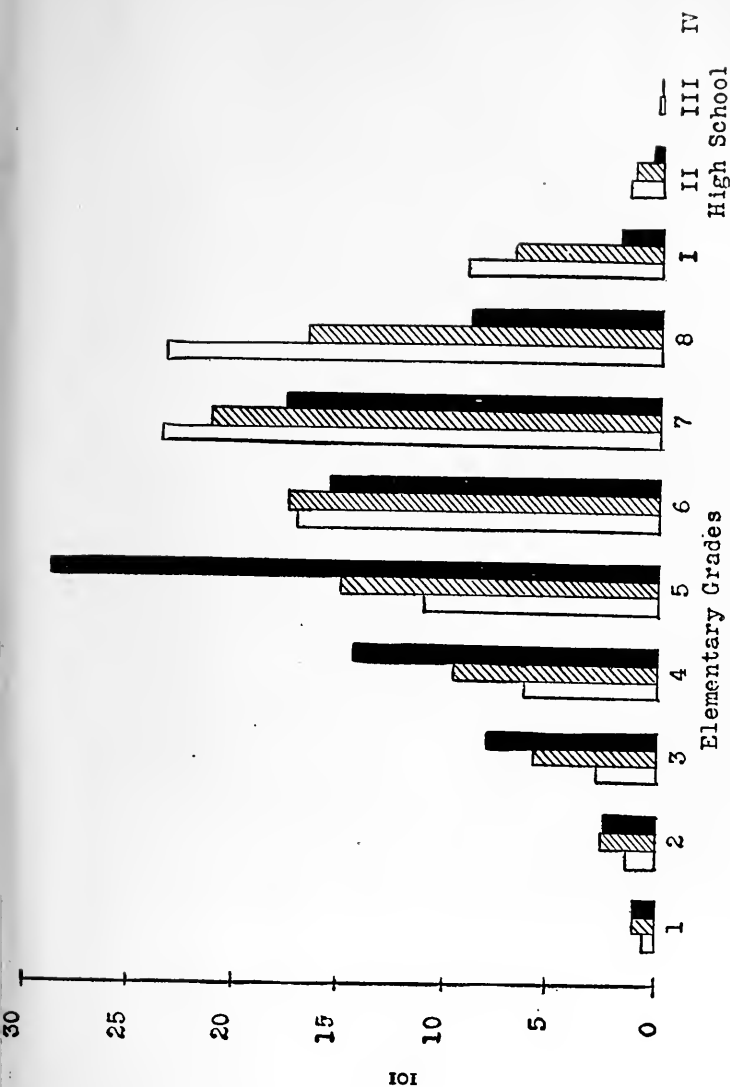


Figure 4. Pupils in rural, graded district, and city schools who, by reason of their age, should be in the eighth grade, distributed on a percentage basis among the grades in which they actually are. White columns represent city pupils; shaded columns, graded district pupils; and black columns, rural pupils.

The remainder were distributed among the other seven grades, with 29 per cent. in the fifth grade. Conditions in the cities are much better, with 37 per cent. in the eighth and higher grades.

Because so many children fail to advance regularly and are so far behind, large numbers of them leave school before completing even the elementary school course. In rural schools, nearly a third of the pupils stop with only a fifth grade education, half of them do not go beyond the seventh grade, not more than 15 per cent. enter high school, and less than 5 per cent. finish high school. City schools carry their pupils much further. Not more than 10 per cent. of the city pupils drop out at the end of the fifth grade, two-thirds of them reach the eighth grade, and more than 20 per cent. complete high school. (See Figure 5.)

Pupils who leave school at the end of the fifth or sixth grade have had only the drudgery connected with learning the simplest skills, viz., reading, writing, and arithmetic. And, worst of all, they do not carry away a mastery even of these simple skills so that they can freely use them in later life. Large numbers of rural children therefore miss altogether the richer portions of the school course.

#### WHAT CHILDREN GET

To find out what children know and can do, 16,700 pupils were given written examinations,<sup>1</sup> and nearly

<sup>1</sup>The giving of the tests in the various counties and cities was under the direction of representatives from the University of Kentucky, the

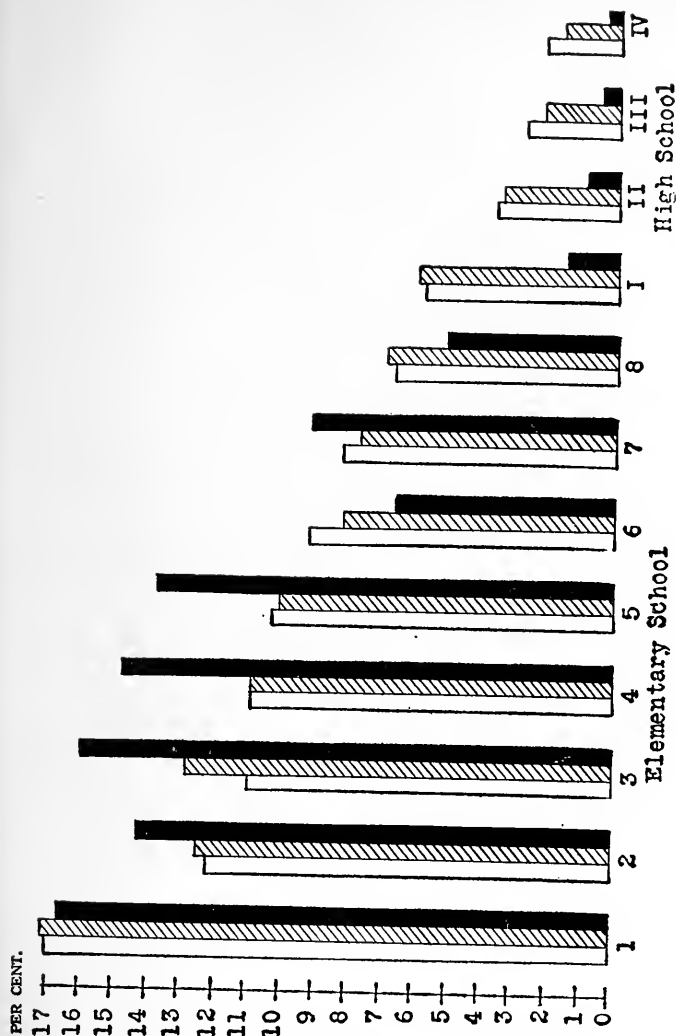


Figure 5. Pupils in rural, graded district, and city schools, distributed on a percentage basis by grades. White columns represent city pupils; shaded columns, graded district pupils; and black columns, rural pupils.

59,000 test papers from these pupils were marked and the results tabulated. The tests were given in the subdistrict or rural schools and in the graded district schools of nine counties—Carlisle, Clark, Hardin, Letcher, Logan, Mason, Russell, Union, and Washington. Each of these counties is typical of its section. The school officials consulted agreed that the results from these counties would fairly represent the state. Tests were also given in fifteen cities—Lexington, Newport, and Paducah of the second class; Ashland, Bowling Green, Frankfort, and Henderson of the third class; and Danville, Elizabethtown, Georgetown, Maysville, Morganfield, Mt. Sterling, Russellville, and Winchester of the fourth class.

In order that the results might be as representative as possible, efforts were made to test the pupils of every school in the above named counties and cities. The only schools not tested were those which could not be tested because they were closed. The tests were given mainly during the week beginning November 28, 1920. The exceptions were the cities of Lexington, Newport, Danville, Bowling Green, and Georgetown, in all of which the testing was done nearer the mid-year period. The results represent, therefore, for most of the small rural schools end-of-the-

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Eastern and Western State Normal Schools, Georgetown College, Berea College, Centre College, University of Louisville, Transylvania College, Kentucky Wesleyan College, and from the state department of education. The tests were given by students from the above named institutions and by county and city superintendents. More than 40 superintendents and 75 students participated.

year products; for the larger rural and for city schools, mid-year products.

While the tests were given in all grades from the third to the eighth, the papers marked and tabulated came from the fifth, seventh, and eighth grades. The fifth grade results were selected because they are an index of the achievements of the large number of children who drop out of school at the end of this grade. The eighth grade results, on the other hand, represent the maximum elementary school product, or the work of those fortunate enough to complete the common school course. Seventh grade results were included so that Kentucky school work might be compared with that of North Carolina and Virginia, states in which the elementary course runs for only seven years.

#### THE TESTS

In the elementary schools, tests were given in reading, spelling, arithmetic, and history.

#### READING

The reading test used was devised to find out how well pupils understand what they read. It consists of eleven paragraphs, with three or four questions on each paragraph. Good third grade pupils should easily read the first of the paragraphs given and answer the questions concerning it. The other paragraphs are successively more difficult until the last is hard enough for high school pupils.

The reading test has been used with pupils in many

other school systems, so that it is known what scores pupils of the several grades should make. For example, pupils completing the fourth grade and ready to begin fifth grade work should make an average score of 41.8; pupils half way through the fifth grade should make an average of 44.9. There are similar standards for all other grades.

Fifth grade pupils from one-room schools, more than half way through the grade, made an average score in reading of 37.0, which represents a quality of work usually done by pupils beginning the fourth grade. Hence, Kentucky's rural fifth grade pupils in one-room schools are a year and a half below the standard reached in other states. City pupils half way through the fifth grade made a score of 42.3, which is about the score that pupils beginning the fifth grade should make. Hence, Kentucky's city fifth grade pupils are a half year below standard. Similar comparisons show that rural eighth grade pupils in one-room schools are two years and a half, and city eighth grade pupils more than a year, below the standard reached in other states. (See Table VI, Appendix.)

Other comparisons based wholly on the returns obtained from Kentucky schools make it clear that the small rural schools of the state are getting results in reading which are a full year behind those of the city schools. For example, eighth grade pupils tested in one-room schools made an average reading score of 47.5, which is 3.2 points below the score of city seventh grade pupils.

These comparisons are entirely fair to the rural schools

and somewhat unfair to the city schools, since the scores of city pupils represent the work of pupils only half way

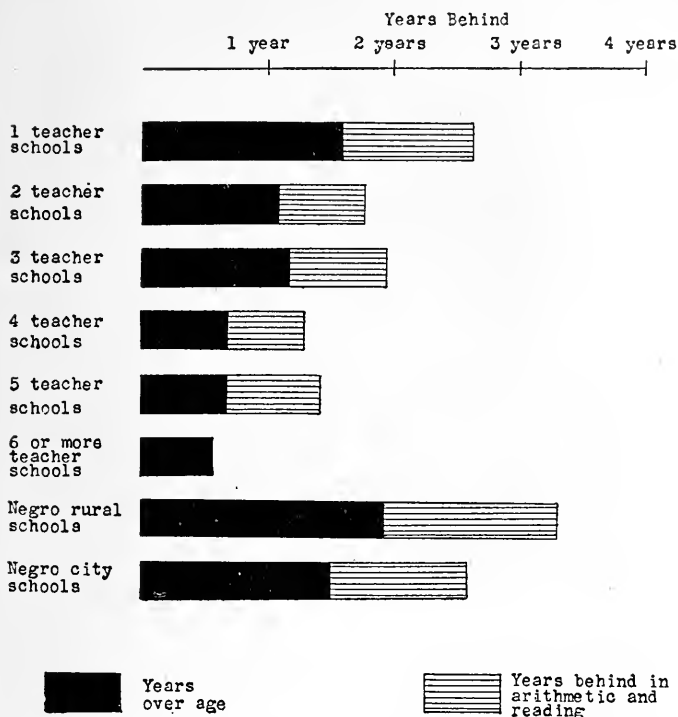


Figure 6. The number of years which fifth grade white and Negro rural pupils, and Negro city pupils, are behind city white pupils when results of arithmetic and reading tests and ages of pupils are considered.

through their respective grades and the scores of a majority of the rural pupils represent the work of pupils nearly at the end of their grades.

The real situation with respect to the work of the rural schools, however, is not revealed unless the ages of the

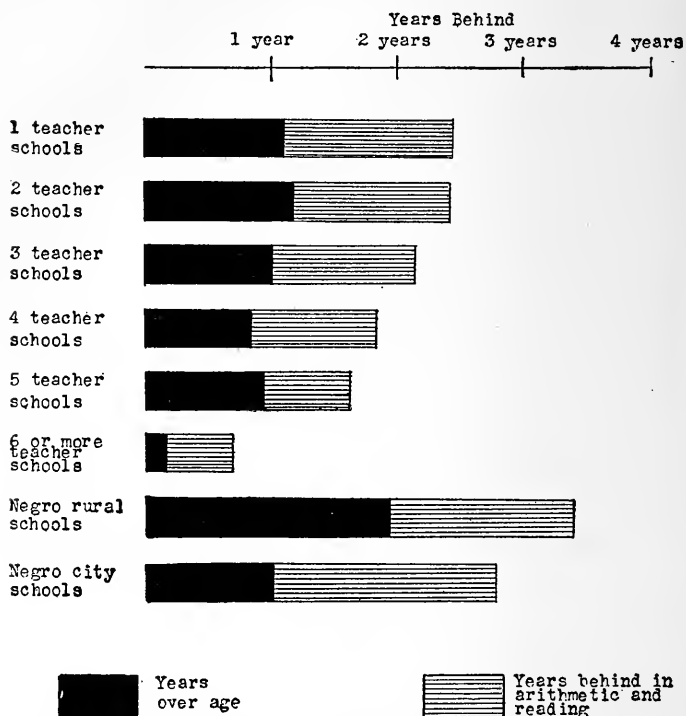
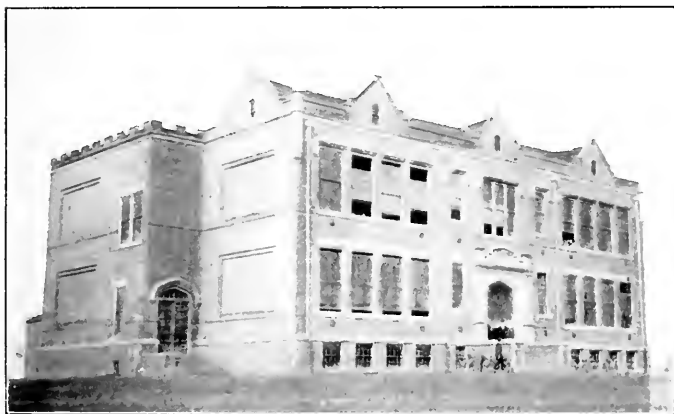


Figure 7. The number of years which eighth grade white and Negro rural pupils, and Negro city pupils, are behind city white pupils when results of arithmetic and reading tests and ages of pupils are considered.

pupils are considered in connection with their achievements. Pupils in the city schools and in the larger rural schools are younger grade for grade than the pupils in the



Graded School District Schoolhouses of Better Type



small rural schools. Rural fifth grade children are on the average a year and seven months older than city children. In the eighth grade there is a difference of thirteen months. (See Table V, Appendix.) When differences in age, and the combined achievements in reading and arithmetic are taken into account, rural children in one-room schools are really two and a half years behind city children. Though the tests show steady improvement as the number of teachers increases, even so, rural schools with six or more teachers are two-thirds of a year behind city schools. (Figures 6 and 7.)

When the work of rural pupils of any grade is compared with the work of city pupils of the same grade it must be admitted that the comparison is between two groups not equally well defined. To permit a comparison between two definite groups, the average reading scores were computed for all thirteen-year-old children in grades 3 to 8 in one-room schools and in city schools. (See Table VII, Appendix.) The reading score of 38.1 which was made by thirteen-year-old children from the one-room schools represents work normally done by children less than ten years old; the score of 48.8 made by city thirteen-year-olds represents a quality of work a little better than that usually done by twelve-year-old pupils. Again, the achievements of the rural thirteen-year-olds are about what could be expected of pupils beginning the fourth grade (nine to ten years of age) and the achievements of the city thirteen-year-olds are about what could

be expected of beginning sixth grade pupils (eleven to twelve years old). Rural pupils of this age are, therefore, from two to two and a half years behind the city pupils.

Measured by what city pupils do, it is evident that the rural schools of the state, especially the small ones, fail miserably in teaching their pupils to read. It is not too much to ask that the rural children of Kentucky should approach more closely to the performance of the city children, especially as the results in reading even in the city schools of Kentucky are, in general, a year below the standard of similar schools in other states. Schools that can get no better results in reading than these are unable to prevent illiteracy, and it is not surprising that Kentucky stands among the states today practically where it stood twenty years ago in the relative amount of illiteracy.

#### HISTORY

History is taught for two purposes—first, that children may know outstanding events, second that they may be able to think about important questions adapted to their years. The test was so constructed as to deal with both objects. Pupils were, for example, asked why they celebrate the Fourth of July; they were also asked to read and interpret a simple passage dealing with historic events. In order to answer correctly, they had, of course, to read and to understand what they had just read; but

as they read poorly, they were bound to make a poor showing in history. (See Table VIII, Appendix.) On the basis of results obtained in other states, eighth grade pupils of one-room schools in Kentucky answered fewer fact questions than sixth grade children of good schools elsewhere, and they made almost a complete failure in questions requiring interpretation of the passage to be read. In fact, a fifth of the eighth grade pupils examined failed to answer correctly a single question requiring thought. Though the scores of city eighth grade pupils both in the fact and thought questions were considerably higher than the rural school scores, even they did not come up to the standard reached by city school children in other states.

#### SPELLING

To find out how well the elementary schools teach spelling, two lists of twenty words each were pronounced to the pupils, which they were asked to write. The following words were used for the fifth grade: *animal, barrel, beauty, famous, careful, break, crowd, election, example, friendship, gentlemen, headache, holiday, owner, property, question, ribbon, saddle, skirt, desire*. The list for the seventh grade included, *announcement, appearance, arrangement, attendance, ballot, response, cordial, customary, disease, enormous, excellent, familiar, individual, interfere, science, mechanical, necessary, original, probably, planned*.

These are all common words and should be familiar

to the pupils of Kentucky. Of the twenty words given to the fifth grade, eighteen are taught below the fifth grade. Two of the words, *headache* and *friendship*, are not studied until the sixth grade. Of the words given to the seventh and eighth grade pupils, five are first studied in the fourth grade, six in the fifth, three in the sixth, and three in the seventh. Three words, *individual*, *mechanical*, and *response*, are not in their spelling books. With the exception of three words, the pupils were not asked to spell any word which they were not required by the state course of study to learn—to learn, indeed, as a rule, before reaching the grade to which the test was given.

What were the results?

While in other parts of the country, fifth grade pupils on the average spell correctly 15 out of 20 of the words given, in rural schools of Kentucky, the children spell on the average less than ten of them correctly; eighth grade pupils in the small country schools did little better than city seventh grade pupils. The average for each of the grades tested in cities falls almost a full grade below what it should have been. (See Table IX, Appendix.)

#### ARITHMETIC

In arithmetic pupils were examined in addition and multiplication. The tests consisted of series of problems which began with very simple ones and advanced to more

difficult ones. The following are representative of those in addition:

|   |    |        |        |
|---|----|--------|--------|
| 2 | 23 | \$8.00 | \$ .49 |
| 3 | 25 | 5.75   | .28    |
| — | 16 | 2.33   | .63    |
|   | —  | 4.16   | .95    |
|   |    | .94    | 1.69   |
|   |    | 6.32   | .22    |
|   |    | —      | .33    |
|   |    |        | .36    |
|   |    |        | 1.01   |
|   |    |        | .56    |
|   |    |        | .88    |
|   |    |        | .75    |
|   |    |        | .56    |
|   |    |        | 1.10   |
|   |    |        | .18    |
|   |    |        | .56    |
|   |    |        | —      |

The following are representative of those in multiplication:

|                |    |      |                |                                      |
|----------------|----|------|----------------|--------------------------------------|
| $3 \times 7 =$ | 50 | 8754 | 16             | $2\frac{1}{2} \times 3\frac{1}{2} =$ |
|                | 3  | 8    | $2\frac{5}{8}$ |                                      |
|                | —  | —    | —              |                                      |

The results of the arithmetic tests in general do not vary from those of the other tests. (See Tables X and XI, Appendix.) City fifth grade pupils did addition work which was about three-quarters of a year below what should normally be expected of them. City eighth

grade addition scores were about a year behind the average achievement of pupils in other states. Rural schools did very poor work in addition. The addition scores taken in connection with the ages of the pupils indicate that the addition work of fifth and eighth grades in the one-room schools is about two and three-quarter years behind that of the same city grades. City schools did about the same quality of work in multiplication that they did in addition, but the rural schools did better in multiplication. Nevertheless, fifth and eighth grade pupils from one-room schools made average scores which show that they are more than two grades below city pupils of these grades.

#### HANDWRITING

No formal measurement of handwriting was attempted, but a simple measure was applied to the writing of third and fourth grade pupils: Did they write their names on the test papers clearly enough to be read? Of the 1,929 third grade pupils, 412, or 21 per cent., failed to write their names so that they could be deciphered. Of the 1,290 names on fourth grade papers, 73, or 6 per cent., could not be read. This, after three and four years in school!

#### PROPORTION OF PUPILS REACHING STANDARD SCORES

The foregoing discussion is based mainly on average scores of pupils in the different grades and in the different types of schools. Variations in scores of individual pupils above and below the average have been disregarded.



Old-Style Schoolhouses of City School Districts



Table XII of the Appendix presents some of these variations. The first step in preparing this table was to determine the percentage of eighth grade pupils who made scores in reading and arithmetic up to or above the normal scores for this grade, and the percentage who made scores at all below normal, below more than one year, two, three, four, or five years. These percentages were then averaged. The results in this form show perhaps better than average scores how poor is the work of the small rural school.

Only one eighth grade pupil in ten from the one-room schools, it will be observed, had scores up to normal. The other nine did work which was from less than one grade to more than five grades below standard. In contrast, of every ten city pupils three made scores up to or above the score normally expected of good eighth grade pupils, while seven had lower scores. Nearly two-thirds of the pupils from one-room schools were below the sixth grade standard, while only slightly more than a third of city eighth grade children fell so low. Forty-one per cent. of rural pupils and 13 per cent. of city pupils were below the fifth grade standard; 24 per cent. of rural pupils and 6 per cent. of city pupils were below fourth grade standard; and six per cent. of rural pupils, but almost no city pupils were below the third grade standard.

#### RESULTS OF TESTS IN ELEMENTARY SCHOOLS

It needs no argument to show that the small rural schools of Kentucky do very poor work. In no county was

the average achievement of pupils from one-room schools in any grade or in any subject as good as the achievement of city pupils, which is usually inferior to that of similar pupils in other states. In general, the achievements of rural pupils were so poor that such pupils will need one, two, or more years of additional training before they can equal the performance of city pupils of the same grade in Kentucky. The results from these rural schools would be bad enough if a minority of Kentucky children were educated in them. Unfortunately, one-half of the children of the state and three-fourths of all the rural children attend one-room schools.

Results from the larger subdistrict and graded district schools are better, but still not satisfactory. In general, the more teachers there are in a school, and the longer the school year, the better the achievement of the pupils. The best results are obtained in the large, well organized city schools.

#### NEGRO SCHOOLS

The scores of the tests given in Negro rural and city schools are considerably lower than those from the corresponding white schools. Negro pupils in city schools did better work than Negro pupils in the rural schools, but the difference between the work of these two groups is not nearly so great as the difference between the work of city and rural white pupils. City Negro pupils in the three grades for which the results were tabulated did work which was about equal to that done by the

white pupils of the same grades in the rural one-room schools.

#### SUMMARY

On the basis of the foregoing tests, it appears that the city elementary schools are below the standard reached in other states in some cases as much as a year. The showing of the rural elementary schools, especially of the one-room rural schools, is wretchedly poor; they are generally two to three years below standard.

In a word, the unsatisfactory conditions in respect to the organization and administration of the public schools of Kentucky have their inevitable result. Politics, lack of training, lack of interest combine to render the schools of Kentucky among the very poorest that, up to this time, have been tested.

## VIII. HIGH SCHOOLS

OUTSIDE the cities and a few progressive graded school districts, the Kentucky high school is a distinctly recent development. Prior to 1908, there were approximately 100 high schools in the state—practically none of them in the country. The law of 1908 created the rural high school, and that of 1916 was intended to procure high school opportunities for graded school children. As a result of these acts high schools rapidly multiplied.

There were in 1921, 404<sup>1</sup> white and 28 colored public high schools in the state, the white public high schools enrolling, in 1920-1921, 25,939 pupils, the colored, 1,446. In June 1921, the white high schools graduated 2,952 pupils, the colored, 161. Of the 326 high schools established since 1908, 82 are under the control of county boards of education. Rural children, however, have access to more than 82 schools. The law of 1908, requiring county boards to establish high schools, permitted them to enter into contract with city and graded school districts to provide rural children with high school instruction. One

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<sup>1</sup>There were probably 17 more white high schools, but the state department of education has no reports from them.

hundred and forty-eight (148) such contracts are now in force, so that, altogether, rural children have access to 230 high schools.

#### QUALITY OF HIGH SCHOOLS

The rural high school should freely recognize the interests and needs of rural life. Unfortunately for this conception of high school education, there are only 82 high schools which are under the direct control of county boards of education and can be made distinctively rural. The other 148 open to rural children are located either in cities or towns and villages, chiefly in the latter. These town and village high schools follow courses of study that lead cityward. The coöperation of rural districts and towns and villages in the establishment of high schools is on the whole desirable, for a better school can be created through joint effort than either party could maintain alone; it is important, however, that the curriculum of the joint school should take account of the rural factor—an entirely feasible undertaking.

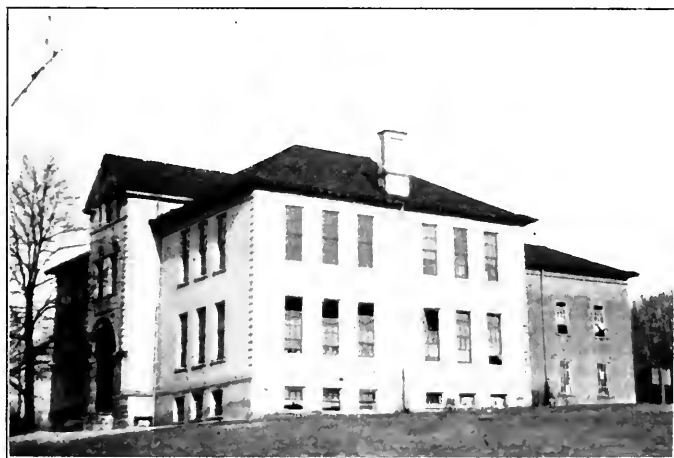
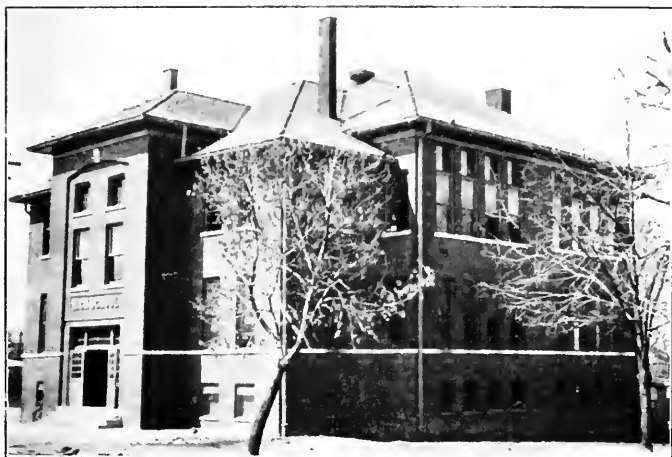
So recent a development as public high schools could not in the very nature of things be entirely satisfactory. In a state where previously nothing of the sort had existed, the fiat of the law could not miraculously evolve the necessary buildings, equipment, and trained teachers. It will not surprise us, therefore, to learn that Kentucky to-day possesses, not a high school system, but the mere skeleton of a high school system. Intelligent effort and increased expenditure over a period of years will be re-

quired if the skeleton is to be converted into a living thing.

The county high school law did nothing more than define high schools in terms of the length of the course offered; it provided that a first class high school should offer a four-year course of study; a second class high school, a three-year course; and a third class high school, a two-year course—all with a minimum year of eight months. Thus classified, public high schools were ranked as follows in 1921;

- 320 first class,
- 24 second class,
- 86 third class,
- 2 unknown or unclassified.

Obviously this method of classification ignores all the factors involved in making a good school except the number of years of instruction offered. Even among the schools grouped as first class, the quality of the instruction must vary greatly, depending, as it does, on the number of teachers employed, their experience and preparation, upon equipment, buildings, and other factors. The Association of Kentucky Colleges undertakes to classify high schools on the basis of their educational facilities. On this basis the 320 first class high schools decrease to 89; the second class increase to 131; whereas 212 are "unaccredited"—i. e., in the judgment of the Kentuckians, which is not and should not be too exacting, 212 Kentucky high schools are so inferior in equipment and teaching staff that they cannot be definitely



Middle-Period Schoolhouses of City School Districts



classified. Thus, despite the rapid multiplication of high schools in the last thirteen years, out of 120 counties in the state, 3 have no public high school at all, and 56 are without a high school that the state colleges regard as first class.

The fundamental defect arises from the lack of trained teachers. Higher certificates of all kinds, whether issued by the state board of examiners, the state university, or the normal schools, have always been valid in high schools. Many teachers are now teaching on these old certificates, issued without the slightest regard to proper qualifications for high school instruction. Others are teaching on county certificates, and still others have no certificate of any kind. The result is that only 23 per cent. of the high school teachers in service are properly prepared for their work.

The number of teachers employed is also frequently inadequate. The Association of Kentucky Colleges requires an accredited school of "A" grade to possess at least 3 teachers—surely not an excessive staff. Of the 432 public high schools, 133 have only two teachers, and 101 have only one teacher.

Of course, the teachers are also overburdened. In 231 Kentucky high schools, teachers are required to teach in excess of six periods daily; and this is probably true in even more schools, since we have no information on the subject in 59 schools. With so heavy a schedule, the best prepared high school teachers can with great difficulty do good work; and good work is impossible when

teachers are poorly prepared, as three-fourths of them are.

High school teachers likewise work without adequate equipment. Outside the large cities, the high school usually occupies two or three rooms in an elementary school building.<sup>1</sup> There is rarely a study hall, seldom a good library, and almost never adequate provisions for science. The reports to the state inspector of high schools show that a considerable sum has been spent in the last decade for scientific apparatus, but change of principal and teachers is so frequent that, owing to lack of care, most of this apparatus has disappeared.

Nor are high school teachers properly supervised. In the cities the time of the high school principal is devoted almost exclusively to organization and administration. Outside the cities high school principals do five or six hours' teaching daily, leaving only an occasional hour free for conference and supervision. The untrained and overburdened teacher, therefore, works practically without direction or advice.

Since 1910 there has been a state high school inspector and supervisor. Until recently his duties were fourfold: (1) He was professor of secondary education at the state university, and during the winter months gave instruction in high school organization, administration, and methods of instruction; (2) he visited county high schools to see whether or not they met the legal require-

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<sup>1</sup>In a small system, a combination elementary and high school building is desirable, and need not prevent proper provisions for the high school.

ments for such schools; (3) he acted as the agent of the Association of Kentucky Colleges, preparing for them annually a list of accredited schools, both public and private; (4) he acted more recently as director of vocational education. In 1920-1921 his work was divided, so that there is now one person serving as professor of secondary education at the university, one person as director of vocational education, and one person in the office of the state department of education devoting his entire time to inspection and supervision of high schools.

The state inspector has devoted himself conscientiously to his duties—visiting high schools, issuing courses of study, holding conferences, delivering public addresses, etc. It should, however, be apparent that his many duties leave him little time for supervision.

Even a high school inspector who gave all his attention to supervision, could not under existing circumstances meet the need. Calls for public addresses, settlement of legal and technical questions, inspection of schools, both public and private, seeking to be accredited by the colleges, consume his time and energy. Either local principals must have more time for supervision, or additional state supervisors must be employed if high school teachers are to get the help needed to enable them to do good work.

Serious as are the foregoing limitations, none of them is as disastrous as the poor preparation of the pupils. On this subject, impressions obtained through visits are

sustained by the evidence procured through actual examinations and tests. In order to ascertain (1) whether high school pupils are qualified to do high school work, and (2) how well they do in a given subject, high school pupils were tested in reading and algebra. The reading test was the same as that used in the elementary school; algebra tests involved addition, subtraction, equations, and the use of formulae.

The results from the reading tests in the high schools correspond closely with those obtained in the elementary schools. (See Table XIII, Appendix.) As city elementary schools do better reading work than rural elementary schools, so city high schools do better work than rural high schools. First year city high school pupils in reading are, on the average, more than a year ahead of first year rural high school pupils. In the other classes the difference amounts to about two years. But city high school reading results in Kentucky are below the achievements of good city high schools in other states. The first year high school pupils make an average reading score below what is normally expected of eighth grade pupils. The fourth year class come within half a year of being up to grade.

Rural high school pupils are also somewhat older than city high school pupils. In the first and second years the difference in average ages is about five months, in the third year, eight months, and in the fourth year, six months.

Variations in high school reading scores of individual

pupils are shown in Table XIV of the Appendix. Of all the city high school pupils who took the reading test, 37 per cent. made scores which were up to or above the standard for the respective classes. Compared with this, only 22 per cent. of rural high school pupils came up to standard. The first year class, both in city and rural high schools, had the largest proportion of pupils with scores below normal. In the rural high schools, 29 per cent. of the first year pupils, 28 per cent. of the second year pupils, 7 per cent. of the third year pupils, and 11 per cent. of the fourth year pupils made scores below the standard which ought to be reached by sixth grade pupils and which is reached by sixth grade pupils in good schools. In the cities, 12 per cent. of the first year class, 5 per cent. of the second, 3 per cent. of the third, and 1 per cent. of the fourth fell as low.

The results in algebra were tabulated according to the length of time pupils had studied the subject. (See Table XV, Appendix.) In the city high schools, pupils who had studied algebra from three to five months were but little below standard; those who had pursued the subject for longer periods did not do so well. In none of the groups was the score of rural high schools as high as those of city high schools. Rural pupils who had studied algebra from three to five months fell considerably below the standard for this group. Those who had studied the subject from eleven to fourteen months did little better than well-trained pupils of only from three to five months.

In a word: A third of the freshmen in city high schools have less than seventh grade reading ability; in rural high schools a half have less than seventh grade, and a fourth less than sixth grade, reading ability. In the cities the difficulty due to inferior preparation in reading is serious, but not insuperable; rural high schools, however, simply cannot do good high school work with pupils so poorly trained in reading. A good high school cannot be built on the basis of a six months' elementary school, inefficiently conducted at that.

#### COURSES OF STUDY

Kentucky high schools usually offer a single course of study—a classical, an English, or a scientific course—following in each instance the outline furnished by the state board of education. Latin is required only in the classical course. The English course is probably the most common, although the classical is a close competitor. In 1920, 148 schools gave the English course; 142, the classical; 57, the scientific; 85 made no report. Whatever the course, there is actually little Latin taught and less science.

In a few larger cities there are four-year commercial courses which prepare directly for clerical positions. A few also give manual training for boys and home economics for girls; and three provide rather extensive industrial courses, including blacksmithing, foundry, press drill work, etc.

Recently a number of rural high schools have been en-

couraged to offer agriculture and home economics. The Smith-Hughes federal fund is available for this purpose. Federal authorities pay approximately 50 per cent. of the salaries of teachers of agriculture and related sciences, and about one-eighth of the salaries of teachers of home economics; the remainder is paid by local authorities. Some \$31,523 of federal funds was so expended in 1920-1921 for agriculture, and \$3,283 for home economics. Thirty (30) white and 1 colored high schools now comply with the Smith-Hughes requirements in agriculture and in related sciences; 17 white and 2 colored, with the Smith-Hughes requirements in home economics.

It is too early to pass final judgment on this work, but two things are becoming clear. First, it is expensive. In one school the instructional cost of agriculture and related sciences alone in 1920-1921 was \$170 per pupil enrolled, and for these subjects the state average cost per pupil enrolled was \$63.45.<sup>1</sup> Home economics is less expensive, and yet the average for 1920-1921 per pupil enrolled was \$17.66. In contrast, the state average instructional cost for all high school work per pupil enrolled was \$69.

Second, Smith-Hughes work does not reach, except in rare instances, either all the boys or all the girls of a

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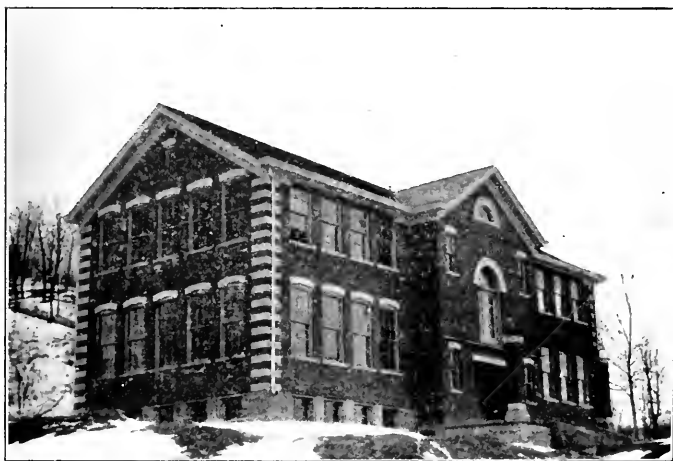
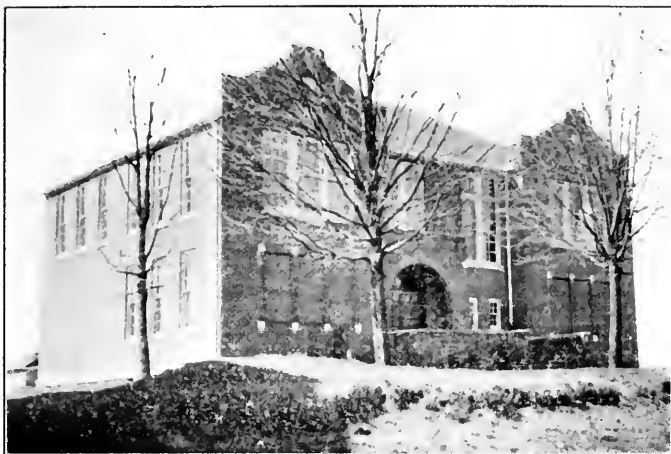
<sup>1</sup>In considering the cost of Smith-Hughes agriculture and related sciences, it should be taken into account that the teacher of these subjects works eleven months a year and not the usual eight to ten months; after school adjourns he supervises the boys' home projects and advises the farmers of the neighborhood.

school. Under present federal regulations, only such boys and girls are admitted to these classes as will give half of their entire school time to agriculture and related sciences or home economics. Many boys and girls refuse to give so much time to these studies. The Smith-Hughes courses therefore do not ordinarily lessen the number of teachers required to carry the usual high school branches; a full program must be carried for pupils who do not take agriculture or home economics. Hence, the Smith-Hughes work is, as a rule, an additional expense over and above the usual high school cost.

As pointed out above, the rural schools urgently need more science teaching, just as they need more and better teaching in other directions. The teachers of agriculture might readily teach science; the teachers of home economics might teach art; and both agriculture and home economics might be open to pupils who give less than half their time to these subjects. Unless some such larger use can be made of these teachers, it would seem that the work in agriculture, if not also the work in home economics, encouraged by Smith-Hughes aid, imposes an unnecessarily heavy burden on the community, and will retard general high school development.

#### LARGER HIGH SCHOOLS

Kentucky high schools are mostly small. Of the 432, 234 are one- and two-teacher schools. A single small county has 9 high schools, only 2 of which are of reasonable size. One cannot say offhand how many high



Modern City Schoolhouses of the Poorer Type



schools a county should have, but it can be stated as a principle that the small high school is as undesirable as the small elementary school. Indeed, the high cost of secondary education, and the greater relative efficiency of the large over the small high school, both with respect to the range of opportunities offered and the quality of instruction, make the consolidation of small high schools as imperative as the consolidation of one-teacher elementary schools.

Small high schools have too often been established to meet a local demand, without regard to the high school needs of the county viewed as a whole. It is one of the great advantages of the county unit that a comprehensive view can be taken of the entire situation. Every high school established should be an essential part of a well-conceived plan aiming to bring high school advantages within reach of all the children of the county. It may still be necessary, on account of transportation difficulties, to establish small high schools with one- and two-year courses, but the number of high schools in a county must be kept to the minimum, if cost and efficiency are to be taken into account.

The existence of so many small high schools, and the attempt of so many to give a four-year course when they have neither the requisite teaching force nor equipment, make imperative the adoption of appropriate high school standards. On the basis of acceptable standards, instead of having 220 fairly good public high schools, Kentucky has probably not more than 60 good high schools at

this time. The state should know the truth, and seek to increase the number of standard schools, rather than rest content under the impression that the high school situation is even fairly satisfactory. In the application of higher standards, private schools should not be exempt. The state department of education should possess the authority to visit, classify and inspect private schools in order that the public may not be misled.

#### SPECIAL STATE AID

Three (3) counties have no high school; 56 counties have nothing approaching a standard high school; 52 graded school districts have neither high schools of their own nor make provision for the high school tuition of their pupils elsewhere. Many other graded school districts and even fourth class cities sacrifice their elementary schools in attempting to support high schools. In short, the cost of good high schools is more than a poor county or community can bear. For this reason no state has been able to develop an efficient high school system without special state aid. Such assistance is especially needed in Kentucky owing to the great differences in wealth and number of children to be educated. Unless Kentucky sets apart a portion of the common school fund to be used in giving special high school aid, or the general assembly can make an appropriation from the general treasury for this purpose, high school progress will be extremely uneven and slow. Failure to give the necessary special state aid would be unfortunate. The

state must look to the high schools if the common schools are to have better trained teachers; on the high schools depend the elevation of the general intelligence of the people, and the development of the colleges and universities, to which the state must look for leaders.

## IX. SCHOOL FINANCES

**W**HAT does Kentucky pay for its schools? Does it pay much for the little it gets or does it get little because it pays little? And how is the money obtained?

### CAPITAL INVESTMENT AND CURRENT COST

School costs cover capital outlay for grounds, buildings, and equipment, and current expenses for maintenance and operation. Kentucky had invested in school plant in 1917-1918 \$22,860,990, a state average per pupil enrolled of \$42.86; a city average of \$109.63, and a rural average of \$30.08. The average for the United States for the same date was \$95.12; the city average, \$146.62; the rural average, \$59.07.<sup>1</sup> That is, approximately speaking, Kentucky as a state invests in school property per child enrolled less than half of the amount that the country at large invests; the cities invest per child one-third less than do cities of the country at large; the counties invest per child about half the amount that the country districts throughout the Union invest. Unfortunately, comparative data for 1920-1921 are not

<sup>1</sup>These comparative data are for 1917-1918 and are taken from Bulletin No. 31 (1920) of the Bureau of Education.

available either for Kentucky or for the other states. Kentucky stood, however, in 1918, fortieth among the states in capital invested in school property. There may have been a slight relative improvement in rank since 1918. But even if this improvement is taken into account, it is easy to see why Kentucky's school plant is poor. Kentucky has probably gotten as much for what it has spent as many another state, but, as pointed out in Chapter V, approximately a half of all the money now invested in schoolhouses has been wasted because of poor building plans—an obvious consequence of having an undermanned and poorly organized state department of education.

Current school expenditures for 1917-1918 were \$8,308,640, a state average per pupil enrolled of \$15.58, a city average of \$30.33, a rural average of \$12.75. The average current expenditure for the United States for the same year was \$30.91; city average, \$40.60; rural average, \$24.13. Again, we lack comparable data for 1920-1921 from Kentucky and from other states. Kentucky's current school expenditures have doubtless increased considerably within recent years, but, as with school property, its ranking has probably not materially changed from that of 1918, when it stood fortieth in current school expenditures. Kentucky's city school expenditures, it will be noted, were in 1917-1918 only about three-fourths of the country-wide city average, and rural school current expenditures only about a half of the country-wide rural average. Good city and rural

schools cost as much in Kentucky as elsewhere. Indeed, there are reasons to believe that they will cost more, for Kentucky has no large body of well-trained teachers.

The educational status of a state is not to be fixed merely by the amount it spends on schools; the financial sacrifice made must also be considered. This sacrifice is expressed in the relation between school expenditures and taxable wealth. While detailed information on this point is neither complete nor satisfactory, the data available suggest that Kentucky is to be ranked with the states bearing a "medium to light school tax burden,"<sup>1</sup> and therefore is not doing its plain duty.

#### STATE SCHOOL SUPPORT

Money for public schools comes from two main sources—from the state<sup>2</sup> and from local school units, the latter comprising county, graded school, and city school districts.

The state has a productive common school fund of 798 shares of the stock of the National Bank of Kentucky, which yields about \$8,000 a year. It also has a so-called common school fund of \$1,933,641.03. This is in the form of two six per cent. bonds drawn by the commonwealth in favor of the state board of education. The

<sup>1</sup>See Educational Administration and Supervision, April, 1921.

<sup>2</sup>A relatively small sum is received annually from the federal government for the encouragement of agriculture, home economics, and industrial education. This amounted in 1920-1921 to \$34,805.95.

first bond is for \$1,327,000, derived in part from the surplus revenue distributed in 1837 to the states by the federal government; the second bond is for \$606,641.03, derived from the return of direct taxes by the federal government in 1892.

The constitution renders this \$1,933,641.03 inviolable and dedicates the income therefrom to the support of common schools. As a matter of fact, no such fund exists. The state spent the principal, thereby relieving past generations of legitimate taxes. Hence the schools do not really get \$116,000 annually over and above what the people are now willing to pay for the support of the schools. A state tax is levied for the sinking fund commission, which pays over to the state board of education the interest on this fictitious common school fund. For all practical purposes the same tax might as well be levied directly for the schools. The common school fund, with the exception of the 798 shares of bank stock, is therefore nothing but a name. ✓

To provide for the schools and its other activities, the state levies a tax of 40 cents upon each \$100 value of all property directed to be assessed for taxation. Eighteen-fortieths "of the aggregate amount of tax realized by all assessments under this forty cent rate" constitutes the entire support of the common schools derived from state taxes and the so-called common school fund. The schools also receive their proportionate share of fines, forfeitures, licenses, etc., and of the inheritance tax. The total so derived during the fiscal year end-

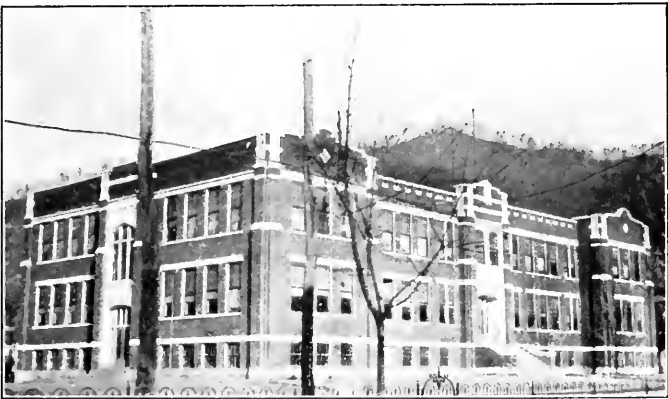
ing June 30, 1921, and allotted to the common schools was \$4,053,507.

Within recent years the state school tax rate has been lowered repeatedly. Between 1904 and 1906, it was 26½ cents; between 1906 and 1918, 26 cents; and since 1918, it has been 18 cents. Notwithstanding these reductions in school tax rates, the amounts derived from state sources for the common schools is slowly increasing. For example:

|            |             |
|------------|-------------|
| 1910-1911, | \$2,985,565 |
| 1915-1916, | 3,373,926   |
| 1920-1921, | 4,347,715   |

On the other hand, a smaller and smaller part of the state's total income is going to the common schools. In 1910-1911, 41 per cent. went to them, in 1915-1916, 38 per cent., and in 1920-1921, 29 per cent. The state's income increased between 1911 and 1921, 104 per cent., whereas the state's support of the common schools increased only 46 per cent. That a state should be doing less and less, in proportion to its income, for common schools, especially at a time when the cost of public education is mounting by leaps and bounds, is extremely significant. Any such movement should be scrutinized carefully lest the children suffer.

State common school funds have almost from the beginning been used for two purposes only. From them are first paid all expenses of the state department of education. These were, for 1920-1921, \$37,521. The remainder is then apportioned to the counties for teachers'



City Schoolhouses of the Better Type



salaries.<sup>1</sup> The apportionment to the counties has always been made on the basis of school population, that is, the number of children between specified ages. These ages have changed from time to time, but now include all children between six and eighteen years old. The school population of the state in 1921 was 646,569. Dividing the total amount to be apportioned in any one year by the number of school census children in the state for that year gives the state per capita, which for 1920-1921 was \$6.10. The amount of state funds going to a county is then found by multiplying this per capita by the number of school census children in the county.

This method of distributing state school funds was first fixed by statute, but since 1891 has been fixed by the state constitution. When adopted, it undoubtedly seemed equitable. There was then neither state school tax nor county school tax. State school funds, derived entirely from the interest on the gift from the federal government, were practically the whole support of rural schools. It was therefore felt that each county should share in proportion to the children to be educated, and likewise each district within the county, for nothing seemed easier than to subdivide a county into districts having a uniform number of school children.

The injustice and unwisdom of this mechanical method

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<sup>1</sup>No mention is made of the apportionment of state funds to graded school and city school districts, for in distributing state funds the school population of these districts is included in the school population of the respective counties.

of distributing state school funds became evident first in the districts. Ordinary geographical obstacles, such as mountains, rivers, swamps, and differences in density of population and lack of roads, make it impossible to divide a county into districts having a uniform number of children. For example, there were in Pulaski County in 1843, 59 districts, in which the children of school age ranged in number from 11 to 114, so that the largest district received ten times more money from the state than the smallest, although each district required a teacher. In 1852, Fayette County had, exclusive of Lexington, 27 districts, with the number of census pupils ranging from 21 to 100, with a corresponding difference in the amount of money received from the state for the support of schools in the respective districts. Relying, as practically all rural districts did up to 1908, entirely on state funds for the payment of teachers' salaries, the schools provided varied in quality from district to district. To illustrate, the school term in the 59 districts of Pulaski County in 1843 ranged from three months to seven months, and in Fayette County in 1852 from three to eleven months. There was a corresponding difference in the salaries paid to teachers; the monthly salary in Fayette in 1852 ranged from \$13.70 to \$63.00.

These inequalities were not overlooked, although nothing was done to reduce them until 1893. At that time, the state superintendent was required, in making his apportionments to the several districts of a county, first to apportion to each district, without regard to

school population, the per capita for 45 pupils, and to prorate the remainder among the districts having more than 45 children on the basis of their school population. This method of distribution, as changed from time to time, tended to diminish the grossest differences in length of term and teachers' salaries, but the differences were not finally eliminated until 1912, when the district and its school population were dropped as the basis within the county for distributing both state and county funds. Thereafter each district shared in the funds available, both state and county, according to its needs; the length of term of all schools within a county became uniform, and all teachers in the same county were paid on a common basis.

But the changes of 1912, so beneficial to the district, did nothing to eliminate equally glaring inequalities among the counties. These inequalities have become especially apparent as the counties participate more actively in the financial support of their respective schools. The present method of distribution places all counties on the same educational basis, so far as state funds go, for each receives the same amount for each school census child. But all differences in the financial ability of the counties to contribute locally to the support of good schools are ignored. For example, Bourbon County in 1920 had back of each child of school age \$7,615 of taxable property; Jefferson, \$4,861;<sup>1</sup> Carter,

<sup>1</sup>The amount in Jefferson is doubtless considerably higher, as in all these compilations certain corporate property is excluded.

\$1,066; and Magoffin, \$545; with an average for the state of \$2,452. The welfare of the state requires that the children of Magoffin get as good an elementary education as the children of Carter or Jefferson; and the more nearly this goal can be attained, the better for the entire commonwealth. Yet for Magoffin to raise locally the same amount of school money per child of school age as Bourbon would require a tax rate thirteen times higher than that of Bourbon; similarly, for Carter to raise the same amount as Jefferson would require a tax rate almost five times higher than that of Jefferson. Owing to these striking differences in local ability to support schools, counties that make the same local financial sacrifice do not enjoy equally good schools. For example, in 1920-1921, Carter County levied a 50-cent school tax and maintained its schools six months; it was, however, not able to pay the legal minimum wage to its teachers, although a majority of them hold the lowest grade of state certificates. In contrast, Jefferson County on the same tax rate maintained its schools eight or nine months and was able not only to pay the legal minimum wage, but to employ a relatively large proportion of well-trained teachers.

A method of distributing state school funds that thus ignores differences in financial resources, ignores differences in the grade and in the quality of the schools although there is equal willingness on the part of the people to make sacrifices for them, and ignores the state's responsibility to provide equal educational oppor-

tunities of a satisfactory standard for all the children of the commonwealth, ought not to be longer tolerated. Sound policy requires that these differences be taken into account in distributing state school funds. Kentucky is, however, tied by the constitution to this unwise and antiquated method of distributing state school funds.

#### LOCAL SCHOOL SUPPORT

The second source of public school support is local school taxes. Every county and city school district and practically every graded school district now levies such a tax. The total amount so raised in 1920-1921 was probably about \$7,500,000.

The state never supposed that the state fund would alone be sufficient to support good schools. The first school law provided for local school taxes, although such levy was optional with the district. State funds might be used to pay teachers, but, from the organization of the system, local school units have been responsible for school grounds, buildings, equipment and incidental expenses. Graded school and city school districts have, with minor exceptions, always supplemented state funds by local taxes, but rural districts were slow to do so. In fact, up to 1908, rural districts rarely levied a school tax. Local school taxes were first required of graded school and city school districts in 1888, but such tax was not made mandatory upon the counties until 1908. Even then a nominal levy met the requirements of the law, and the maximum that might be levied could

not exceed 20 cents on each \$100 value of assessed property. In 1918 the maximum was raised to 30 cents, and in 1920 to 50 cents.

7 The mandatory local school tax legislation of 1920 stands as a landmark in the educational history of the state and differs from all previous similar legislation. It fixed a minimum local school tax—25 cents on each \$100 value of assessed property—that all county boards of education must levy. Kentucky has therefore really had mandatory local school taxation only since 1920.

The late acceptance of mandatory local school taxation is an important element in explaining the slow development of public education in Kentucky, and the present low educational ranking of the state. It is, however, a principle that needs to be applied more and more if Kentucky is to have the kind of public schools its children deserve. For the state should give special and additional financial assistance only to those who first help themselves.<sup>1</sup>

7 <sup>1</sup>There is one item of local school support that calls for special mention. The counties themselves have a permanent school fund, although this is held as a part of the permanent state school fund. This permanent county school fund amounts to \$381,986.08, and is in the form of an irredeemable state debt on which the state guarantees 6 per cent. interest payable semi-annually. The income therefrom is distributed directly to the counties in proportion to their share of the principal. Their respective shares range from \$13.55 to \$15,931.66, and their annual incomes therefrom vary accordingly. This permanent county school fund grew out of state apportionments which the counties were unable to use for one reason or another and turned back to the state to be held to the credit and for the benefit of the respective counties. The law of 1890 quite

## STATE VERSUS LOCAL SCHOOL SUPPORT

The introduction of the principle of mandatory local school taxation has changed, especially within recent years, the relation between the amount of state school funds and the amount of local school funds available annually. The per cent. derived from state and the per cent. derived from local sources since 1900 have been as follows:

In 1900, from state sources, 62 per cent.; from local sources, 38 per cent.

In 1910, from state sources, 53 per cent.; from local sources, 47 per cent.

In 1917-18, from state sources, 44 per cent.; from local sources, 56 per cent.

In 1920-21, from state sources, 38 per cent.; from local sources, 62 per cent.

The increase in school funds derived from local sources is a wholesome development, but the same cannot be said with confidence of the failure of state school funds to keep pace with this local increase. What the proportion should be between the two is admittedly difficult to determine. Experience elsewhere throws little light on the question. In most southern states a relatively large proportion of the total support of the public schools comes from state taxation. In the North practice is not so uniform. In cer-

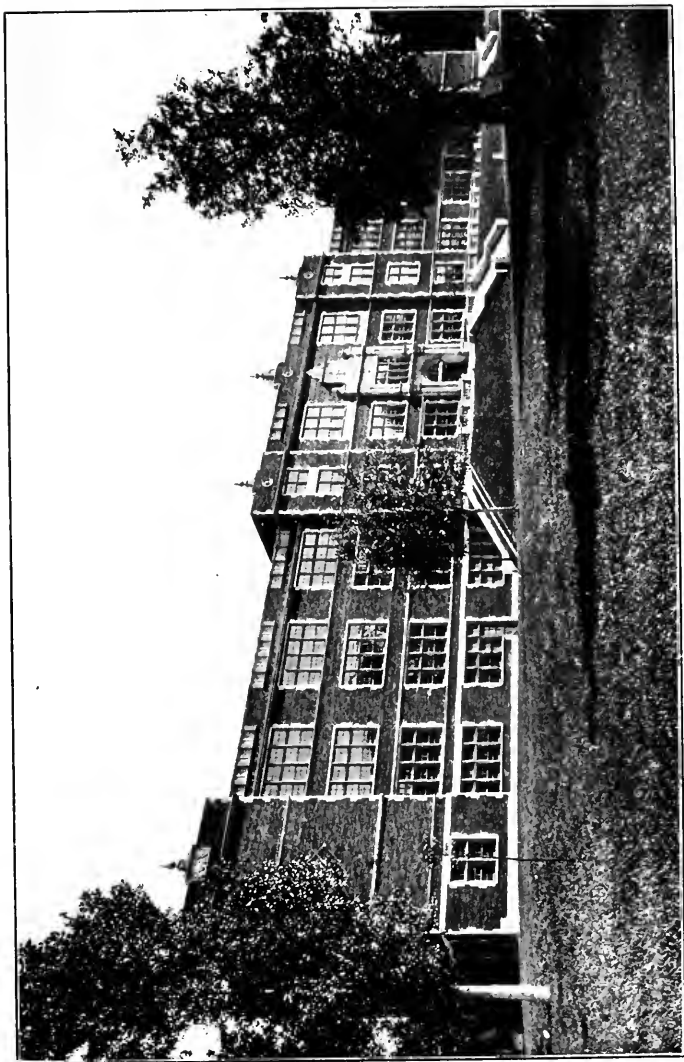
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properly stopped the growth of this fund, and justice would dictate that, if the constitution permitted, it should be covered into the permanent state school fund.

tain states, for example, Colorado, Iowa, Illinois, and Massachusetts, almost the entire burden of public school support is thrown on the local school units; in others, such as Maine and New Jersey, the state bears as much as 40 per cent. of all current school costs.

As a matter of principle, the state must be regarded as responsible for maintaining, throughout the commonwealth, a system of public schools of a satisfactory standard. In a state where both population and wealth are evenly distributed, and the wealth is everywhere ample to support good schools, there is little need of a large state school fund. In a state where there are striking differences in the distribution of population and wealth, the necessity of equalizing educational opportunities calls for a large state school fund. As we have pointed out, Kentucky is marked by extreme variations in both population and wealth. Therefore, if public schools of a satisfactory standard are to be open to all the children of the commonwealth, Kentucky must have a relatively large state school fund.

For these reasons it is highly unfortunate that the state's share of public school revenues has not kept pace with the increased local school support. Not only should the proportion the state contributes to schools be greatly increased, but, as we shall point out later, the amount that it contributes should also be greatly increased. But this increased state support cannot and should not relieve local school units of the duty of also increasing their support. Indeed, further local support



City High School Building of Best Type



must be both encouraged and required if the public schools of Kentucky are to develop satisfactorily.

#### COLLECTION AND PAYMENT OF SCHOOL FUND

In general, state school taxes and local school taxes are assessed and collected as other taxes. One point in this connection deserves attention. The assessed valuation of railroads and corporations is fixed by the state tax commission. To make up the state assessment roll for railroads and corporations presents no unusual difficulties, but it is difficult to make it up for the county, graded district, and city school tax. The present process is so complicated and responsibility is so divided that there is danger that much railroad and corporation property may escape local taxation. The responsibility for fixing the value of railroad and corporation property to be taxed in county school district, graded school district, and city school district should be placed squarely on the state tax commission and on the respective local tax commissioners, and railroad and corporation taxes should be collected as other taxes are collected. The county superintendent would thus be relieved of duties which for obvious reasons he is ill-suited to perform.

Finally, the schools are run to a large extent on credit. County school terms are often entirely over, and graded and city school terms half over, before funds in any considerable amount, either state or local, are available, since state and local taxes are for the most part not returned before December. The state auditor is re-

quired to issue interest-paying warrants when money is not available for the September, October, November, December, and February state apportionments. Even at the end of the school year outstanding unpaid school warrants frequently exceed \$500,000. School boards • have recently had difficulty and at times have found it impossible to discount these state school warrants. Lacking adequate local funds, and unable or unwilling to borrow on state school warrants, school boards leave their current bills unpaid, and teachers are frequently without their salaries for months at a time, to the discredit of the board and the humiliation and inconvenience of the teachers.

Repeated efforts have been made to correct this unfortunate condition, but further action is needed. County boards of education should be directed to borrow money against current revenues due, for the payment of teachers' salaries. The state treasurer should also be authorized to borrow money against state school warrants and turn the borrowed funds over to local school officials, the interest being charged against the common school fund. The real corrective would, of course, be to set back to June 30th the final date for collecting taxes for the ensuing school year. This would guarantee funds in hand before the new school year opened, save thousands of dollars of interest, and place boards of education on a sound business basis.

PART II  
NEEDED IMPROVEMENTS  
CHAPTERS X-XIII



## X. BETTER STATE ORGANIZATION AND ADMINISTRATION

FROM the foregoing discussion it must be apparent that the improvement of the schools of Kentucky requires better organization and administration, better trained teachers, larger schools, a longer school term, and more liberal financial support.

### NEW STATE BOARD OF EDUCATION

The vote of the people against Constitutional Amendment No. 1 makes impossible at present a complete reorganization of the state department of education. Nevertheless, the present *ex-officio* state board of education should be abolished, and, so far as possible, a properly constituted board put in its place. To the new board should be given the powers now exercised by the present state board of education, for example, the enforcing of the school laws and prescribing rules and regulations for the management of the schools. The power of enforcement should, however, be direct. From time out of mind the state board of education and the state superintendent have had the right of complaint to the county court, the county attorney, and to the commonwealth attorney, but it has been next to im-

possible to get these officials to act. Punishment for criminal offenses must, of course, be left to the proper courts, but the state board of education, through its executive officer, should be authorized to deal directly with school officers who fail to perform their duties or violate the school laws; that is, it should have power to remove any common school officer, elected or appointed, and revoke certificates of all kinds, for cause, after due notice of the charges and after opportunity for public hearing.

Boards possessing powers that properly belong to a state board of education, such as the state board of examiners, the vocational education board, and the state textbook commission, should be abolished, their powers and duties being transferred to the newly constituted state board. The location of these varied powers and duties in a single board will centralize responsibility, guarantee unity of administration, and eliminate duplication and waste.

In the establishment of a properly constituted board, a number of considerations must be kept in mind. Too frequent change in membership endangers the continuance of well-devised plans and needlessly exposes the schools to the influences of political and other upheavals. Again, a board that is too large becomes unwieldy and gets in its own way; a board that is too small ceases to be representative. The makeup of the board is also important. When a state board of education has the power to select the state superintendent, he should

not be included in its membership. But the superintendent of public instruction in Kentucky is a constitutional officer and should for this reason be included. He should, however, be the only *ex-officio* member, for the arguments given above against state officials elected to specific state offices being members of the state board of education are unanswerable.

Whether professional educators should be included depends on the view held of the purpose and function of such a board. If the board is regarded as an agency meant to formulate policies and plans, and to participate actively in their execution and in the administration of the schools, professional educators should obviously be included. But in our judgment, such is not the proper function of a state board of education. To our mind the state board should not primarily originate educational policies, nor should the board itself execute them; least of all should it concern itself with the details of management. The board should represent the people in an advisory and legislative capacity and should depend for professional guidance and for the execution of its policies on its executive officer, the state superintendent. On this view, amply vindicated by the experience of other states, the board should be composed of broad-minded and highminded laymen. What is wanted and needed is the lay point view, to review the policies and plans submitted for approval by its executive officer and to judge of his execution of them. If expert advice other than that offered by the state superintendent is

desired, this can be easily procured from the educators of the state, who always stand ready to serve the cause of public education. Moreover, when a state board of education possesses the powers needed to direct and supervise a public school system, there are few, if any, educators in the state who are not subject, directly or indirectly, to its authority; and this is another reason for excluding schoolmen from membership.

Experience in other states suggests that a board of nine members, including the state superintendent as is necessary under present limitations, composed of both men and women, would probably prove most satisfactory for Kentucky. The constitution limits the terms of such members to four years. With a board of eight lay members, serving for four years, it would be well to arrange their terms at the outset so that there would be two appointments in the first year thereafter, two in the second, two in the third, and two in the fourth year. Members should, of course, be eligible for reappointment.

Experience also favors strongly appointment by the governor as the best method of obtaining a non-political board animated by a fine spirit of public service. In 27 states out of the 33 having other than strictly *ex-officio* boards, the governor appoints the members. In Michigan, only, are the members elected by the people. In New York and Rhode Island the legislature chooses. In Virginia the senate and state board of education appoint. In Wyoming the state superintendent appoints, with the approval of the governor. In Wisconsin the



Playground and Athletic Field



governor appoints five and educational boards and institutions appoint three.

In an increasing number of states, both city school boards and county school boards are elected by the people. A method sound in principle and successful in small compact units, like a city or county, is not necessarily applicable to a large area like a state. The fatal weakness in the election of state board members is this: The type of men and women most likely to be valuable can rarely be induced to go through the processes involved in popular election. Moreover, the choice of state board members at a general election is almost certain to plunge the board deeply into party politics. The same is true if the appointment is turned over to the state legislature, unless the term is very long, as in New York, where it is twelve years.

#### ADEQUATE PROFESSIONAL STAFF

The creation of a state board of education, composed of the state superintendent and eight lay members, invested with adequate and appropriate powers, will improve the public school system, but satisfactory results will not be obtained unless the state superintendent possesses an appropriate clerical, stenographic, and professional staff to assist him in enforcing the school laws, in executing the policies of the state board of education, and bringing to interested citizens, local school officers, principals, and teachers the assistance that is constantly being asked for.

To do well the work that lies immediately before it, the state department of education should be organized somewhat as follows:

1. Office of state superintendent, having, in addition to the superintendent and his personal secretary, an assistant superintendent in charge of the entire office and authorized to act in the absence of the superintendent.

2. Division of school records, school reports, and publications, in charge of a director.

3. Division of business methods and school accounts, in charge of a director.

4. Division of schoolhouse plans, in charge of a director (a school architect), one assistant, and two draftsmen.

5. Division of teachers' certificates, in charge of a director, two assistants, and temporary question makers and readers of examination papers.

6. Division of teacher training, in charge of a director.

7. Division of supervision, with at least six supervisors, in charge of:

a. White elementary schools (3)

b. Colored elementary schools (1)

c. High schools (2)

8. Division of agricultural and industrial education, in charge of a director and two assistants.

9. Division of health and physical education, in charge of a director.

The superintendent and the head of each division

must, of course, be provided with the necessary stenographers and clerks.

The entire department, including salaries, traveling expenses, postage, printing, etc., would cost approximately \$165,000 annually, exclusive of the fees collected from teachers taking examinations and receiving certificates. This exceeds the present state total expenditures, exclusive of \$35,765 from the federal government and the General Education Board, by \$100,000. But \$165,000 is a small general overhead expense—only 4 per cent. of the state school funds, to say nothing of local funds. Nothing can be more unwise than a niggardly attitude toward expenditures incurred for supervisory work. Education in Kentucky cannot advance until larger sums are expended for general overhead; but care must be taken that the agents selected have the proper training, personality, ideals, and authority.

#### SUMMARY

If Kentucky should obtain a non-partisan board of education, composed of men and women who are profoundly interested in popular education and keenly aware of existing defects; if the state superintendent were aided by an adequate force of active, well-trained assistants, working uninterruptedly to enlighten the people and to assist local officials—if these simple steps should be now taken, the educational millennium would not at once dawn, but every year would see the state creep a notch higher in the scale of relative educational efficiency.

## XI. BETTER LOCAL ORGANIZATION AND ADMINISTRATION

### COUNTY ORGANIZATION

THE legislation of 1920 is so sound that no considerable change need be made in county school organization. Among the minor changes called for is the repeal of that part of the county school bond law of 1912 which creates a separate school building commission. In the interest of unified responsibility and coherent policy the powers and duties of this commission should be transferred to the county board of education.

The law of 1920 wisely made the superintendent the executive officer and secretary of the county board of education, with special authority over the teaching body, including their appointment and assignment. The law erred, however, in making the superintendent also the treasurer. One and the same person should not be both the custodian of public funds and the active agent in their disbursement. The county treasurer should be the treasurer of the county board. He should, of course, be required to keep his school accounts in such form and to make such reports as may be required by the county and the state board of education.

Apart from modifications needed to unify the several

laws passed at different times, the above suggested changes will give Kentucky an excellent county school law. There are but two important exceptions to this: Sooner or later all graded school districts should be returned to the county system, and the county school tax should be levied like other county taxes on all the property of the county. But good schools cannot be made by mere laws. The counties must in the first place obtain better trained superintendents, to secure whom higher salaries must be paid. Many of the new county boards are indeed already paying in excess of the present minimum, \$1,200 per year, but in order to attract reasonably well-trained superintendents to all counties, the minimum should be increased to not less than \$2,400, provided that the county superintendent meets the highest standard of qualification.

The moment the salary is raised the county is in position to demand talent and training of a high order. Hence, no superintendent should hereafter be employed who has not had five years of experience as teacher, supervisor, or administrator, who has not completed the equivalent of a standard college course, and who has not had in addition, when due credit is given for experience and outside reading, at least one year of special study in county administration and supervision. Few county superintendents now in service meet these very reasonable requirements. For the present, therefore, an elastic arrangement should be made, permitting the temporary employment of less highly trained officers;

but these officers should not receive the larger compensation meant as an inducement and remuneration to more highly trained superintendents.

Conditions need also to be made more favorable to effective work. More suitable and better equipped offices must be provided, and the county superintendent should have clerical and professional aid. In each office there should be not less than one clerical and stenographic assistant. There should also be well-trained supervisors, at least one in each county, and sooner or later an additional one for approximately every fifty teachers in excess of seventy-five. But until the state obtains better trained superintendents, it would be a waste of money to bring back rural supervision. In any event, nothing is to be gained through the employment of half-trained persons for supervisory work. Standard qualifications should be prescribed, calling for a minimum salary of at least \$1,800, and no supervisor should be employed who does not possess standard qualifications. The re-introduction of rural supervision in Kentucky will be slow, if for no other reason than that qualified supervisors must first be trained.

Most of the counties are already provided with attendance officers. The few that are without them should take immediate action to secure them. These officers, supported by a properly drawn compulsory attendance law, will improve rural school attendance. But county children will not attend school regularly until public sentiment more fully appreciates and more earnestly

supports public education. The introduction of school physicians and nurses, whether through the agency of the county board of education or county board of health, would undoubtedly operate to the same end. Measles, mumps, and whooping cough now close the rural schools for weeks and months at a time—a thing that does not happen where school doctors and school nurses are provided.

Finally, county boards of education must furnish superintendents, supervisors, and attendance officers, school doctors and school nurses, with transportation at the expense of the county, and pay all expenses incurred in the performance of professional duties. So long as school officials are required directly or indirectly to pay the whole or a part of such expense, regular and efficient service cannot be expected.

Efficient administration, efficient supervision, and efficient health service naturally suggest a lengthened school term. A good elementary education cannot be given in a school year of six months. Lengthening the school term is also the first step toward getting well-trained teachers, for well-trained teachers will not take charge of rural schools unless they are given a full year's work, and with it, of course, a full year's pay. Rural school salaries indeed should be higher than the salaries of city teachers. Otherwise, well-trained teachers will not endure the isolation, the inconvenience, and the hardships of rural life. In a word, the improvement of rural education involves not only more efficient administration,

but a school term of nine or ten months, and a salary schedule which will make rural teaching a livelihood and a profession. Inasmuch as 74 per cent. of the people of Kentucky live in the country, it is obvious that the state will continue to be backward until the above-mentioned steps are taken in behalf of rural education.

Educational progress in certain sections will long be handicapped by a large number of one-teacher schools—unavoidable owing to the lack of good roads and the mountainous character of the country. Elsewhere one-teacher schools can be readily eliminated in favor of union or consolidated schools. In consolidated schools pupils can be better classified and graded; teaching can be more effectively distributed and supervised. Attendance is more regular because they offer larger educational opportunities furnished by playgrounds, gymnasium, laboratories, courses in home-making and farming, demonstration fields, assembly hall, etc. The consolidated school also quickly becomes a community center, adding interest and variety to adult as well as to child life.

Few counties are without consolidated schools, and in one or two, most one-teacher schools have already disappeared. However, in too many cases consolidations have been effected without a comprehensive study of the entire county situation. It happens, therefore, that consolidated schools are sometimes unfavorably located and that certain one-room schools are left stranded in the open country. As consolidation aims to organize county



Negro Rural Schoolhouses



school resources economically and effectively, it is obvious that it must not proceed on a mere neighborhood basis.

In most instances the responsibility for the new consolidated building has been thrown in whole or in part on the subdistricts consolidated, generally the richest and the less densely populated. For example, the first consolidated district in a certain county contained approximately one-ninth of all the wealth, but only about one-seventeenth of all the children. Experience in other states has proved that rich districts, when permitted or compelled to pay by local tax for their consolidated school buildings, sternly resist a county tax levied to provide consolidated buildings for the remaining less well-to-do districts. "We paid for our consolidated building," they say, "let the other districts pay for theirs." Inasmuch as the poor districts are unable to do this alone, thoroughgoing consolidation is halted.

Consolidated districts may well be permitted to levy an additional local tax to be used for transportation, a longer school term, better trained teachers, etc., but the need of such local tax will decrease as the general level of the county schools is raised. To illustrate: If a county provides a school term of only seven months for all districts, a consolidated district that wants a nine months' term must provide two additional months by local taxation; if later the county provides for an eight months' term in all schools, the consolidated districts need to provide only one additional month in order to

have a nine months' school. Hence the local district tax falls as the general county tax rises.

If serious obstacles to complete consolidation are to be avoided, all consolidated schoolhouses, like ordinary schoolhouses now, should be erected and paid for by the county board of education, and the funds therefor raised either by a county bond issue or by current county school tax levies.

To provide for the needed improvements in administration and supervision, for a standard school term of nine or ten months, for well-trained teachers in all schools, and to put consolidation on a proper basis will call for increased county school expenditures. All these improvements cannot and should not be undertaken at once; but a program should be deliberately adopted and a beginning should be made immediately. The counties may confidently look to the state for still more liberal assistance, but the chief burden for improved rural schools must be borne by the counties themselves. Therefore, the present minimum compulsory county school tax of 25 cents should be raised to not less than 35 cents for teachers alone, and the maximum that may be levied (now 50 cents) should be raised to a dollar. Good rural schools cost more than good town and city schools, and country dwellers must be willing to pay at least as high taxes as city folk.

A comprehensive plan, such as is here proposed, requiring many years for complete realization, is not likely to be adopted, and is still less likely to be pursued, unless

the state department, freed from political control and respected by all persons, regardless of politics, is in position to frame and to follow up such far-reaching educational plans.

#### SINGLE CODE AND STANDARDS FOR CITY SCHOOLS

The organization and administration of city schools already follow closely the best practice of the country. The adoption of a single code for all cities would, however, simplify school laws, simplify administration, and give opportunity to make some needed changes. But should there be opposition to a single code, the city codes should be amended as there is need. For example, boards of education in first class cities should be made independent financially of city councils, and in second class cities the school tax which the board of education may levy or cause to be levied should be raised to probably not less than \$1 for all purposes on each \$100 of assessed value of property.

A certain amount of general legislation affecting all cities is in any event necessary. For example, provision should be made for the state certification of city superintendents, city supervisors, and all city teachers—cities retaining the right to require higher qualifications than those imposed by the state; and particularly for setting up standards which all city schools must meet if they are to continue to operate independently of the county system. Cities failing to meet these standards ought to be returned to the county system, for the same reasons as

have been given above for the return of graded school districts.

The standards to be met by all cities operating independently of the county should be approximately as follows:

1. Each city should possess taxable property of not less than \$1,250,000.

2. Each city school district should provide ample school grounds, including playgrounds, athletic fields, and sanitary and hygienic schoolhouses, constructed according to plans approved by and in accordance with the rules and regulations of the state board of education.

3. Each city school district should maintain satisfactory elementary schools and at least one first class high school, with a school term of not less than 180 school days or 9 months.

4. Each city school district should in the future employ a superintendent who has had not less than five years' experience as teacher, supervisor, or administrator, who has completed the equivalent of a standard college course, and who has had in addition, when due credit is given for experience and outside reading, not less than one year of special study in city administration and supervision. For the smaller cities it will doubtless be necessary for a time to permit lower qualifications, but certainly these higher qualifications should at once be made effective for first, second, and third class cities.

5. Each city school district should henceforth employ only such new elementary teachers as have completed the equivalent of a four-year high school course,

and, in addition, not less than a two-year normal school course.

6. Each city school district should henceforth employ only such new high school teachers as have completed the equivalent of a standard four-year college course, including professional work in high school instruction.

7. Each city school district should henceforth employ at least one whole- or part-time attendance officer.

While these standards are not high, they mark a distinct and feasible advance beyond present conditions.

The foregoing recommendations, if carried into effect, would leave little to be desired so far as the legal status of city school districts is concerned; but they leave untouched the fundamental question: Shall city school districts be exempt from the county school tax, or shall they pay the county school tax, receiving in return from it only their equitable proportion? We do not press the point now because there are so many other imperative improvements claiming immediate attention, and it would be unfortunate to complicate the situation further by forcing this issue.

#### RETURN OF GRADED SCHOOL DISTRICTS TO COUNTY

Probably the most far-reaching recommendation affecting local school organization and administration is the return, so far as this is possible and advisable, of graded common school districts to the county. The conditions calling for this recommendation were reviewed

above, and the main reasons only need to be restated here.

The improvement of the rural schools is fundamental to the welfare of the state. The existence of graded school districts in large numbers prevents the development of a sound county system, for the more progressive and prosperous communities are, through the organization of graded school districts, constantly drawn off, leaving to the county system only the less progressive or less wealthy sections.

The return of the graded school districts to the county will not only benefit the county, but will also be to the advantage of the districts themselves. Graded school districts acting alone can rarely, at a reasonable rate of taxation, provide for their children up-to-date school plants, including adequate playgrounds, athletic fields, gymnasiums, laboratories, and assembly halls; good elementary schools and high schools with extended programs, including physical education, science, courses in home-making, farming, etc.; the proper administration and supervision; and attendance officers, school doctors, and school nurses. An up-to-date plant and the teachers to carry a modern school program can, as a rule, care for more children than a single graded school district contains; a well-trained county superintendent with a strong professional staff can administer and supervise the schools of the county and of the graded school districts as well; the same attendance officers, school doctors, and school nurses will also serve for all. Furthermore,

the return of graded school districts to the county prepares the way for a rational consolidation of many schools, since these graded school districts are as a rule natural consolidation centers. Thus by combining resources, both the county and the graded school districts can enjoy educational advantages which neither can provide acting alone.

On the other hand, long-standing injustices to the county will be wiped out—such as, for example, gerrymandering graded district boundaries to include every possible bit of corporate property in order to secure for the graded district the sole benefits of concentrated wealth, and throwing upon the county the responsibility of educating the colored children of villages and towns.

Other advantages will follow the creation of a genuine, inclusive county unit. It will simplify state supervision, reduce the amount of personal interest in the management of the schools, do away with much petty graft, prevent irregularities in the handling of public funds, and facilitate the enforcement of school laws, now openly violated in certain sections by graded school districts.

When graded school districts so far as possible and advisable are returned to the county, all property belonging to them will pass to the respective county boards of education, and the county boards, after proper audit, will assume all outstanding debts and become responsible for the financial support and general management of the schools. This, however, does not preclude sections from doing more for their own schools than county

boards may be able to do for all. They may well be permitted, under proper restrictions, to levy additional taxes, beyond the state and county tax, and to use the funds in ways mutually agreed upon between the local trustees and the county board of education for the sole benefit of their respective schools.

A change so far reaching in its effects cannot and should not be made too hurriedly. At present we merely recommend that no new graded school districts be organized or enlarged, that all graded school districts be required to levy a graded school district tax which shall be not less than the minimum school tax required of all counties, and that graded school districts be returned to the county only when this would mean a better school.

## XII. BETTER TRAINED TEACHERS

**B**ETTER leadership is Kentucky's first educational need. But efficient superintendents, supervisors, and principals must have better trained teachers to work with. Obviously, do what it will, Kentucky will never have satisfactory schools until its teachers are better trained. The steps to be taken to secure better trained teachers are clear. A sound certification system must be established, the salaries paid must be adequate, and larger teacher training facilities must be obtained.

### CERTIFICATION SYSTEM AND SALARY SCHEDULE

Different kinds of school work call for different kinds of preparation. Elementary school teaching calls for one kind of training, high school teaching for another kind. A sound certification system will, therefore, provide as many kinds of certificates as there are kinds of school work calling for specific and prolonged preparation. Each given kind of certificate will be valid only in its own field. For example, elementary certificates should be valid only in elementary schools, high school certificates only in high schools. The several kinds of certificates to be provided would include city superintendents' certificates, county superintendents' certificates, supervisors' certi-

ificates, high school principals' certificates, rural high and elementary school principals' certificates, elementary school principals' certificates, high school teachers' certificates (including specialized high school certificates, such as those for home economics, and agriculture), and elementary school teachers' certificates (including primary elementary, intermediate elementary, and grammar grade elementary).

Theoretically, there should be only one grade of certificate for each kind issued, that is, one grade of city superintendent's certificate, one grade of high school teacher's certificate, one grade of elementary school teacher's certificate, etc. This single certificate should be a first grade, or standard certificate of its kind, and should be issued only on the basis of the preparation which experience has shown to be necessary to the successful performance of the particular kind of school work for which the particular certificate is issued. For example, it is generally accepted that a high school teacher should be a college graduate and have had as a part of his college course professional work especially related to high school training. Similarly it is generally accepted that an elementary teacher must at least have completed a standard high school course and have had in addition not less than a two-year course especially related to elementary school teaching. A certification system pitched on this level would bar all persons from the schools who have not had a minimum standard training for the specific kind of school work which they desire to undertake. Ideally, this is what

should be done; it would ensure a body of professionally trained teachers. But this high and single standard for each kind of certificate is not now practicable for Kentucky.

As previously pointed out, only 23 per cent. of all high school teachers in service could meet the generally accepted standard for high school teachers' certificates, and only 10 per cent. of all elementary teachers could meet the generally accepted standard for elementary school teachers' certificates. The schools would be closed if any such standard were proclaimed and enforced; clearly, the state, while aiming at this goal, must be content to approach it gradually.

That so large a percentage of teachers in service do not now meet acceptable standards of preparation does not lessen the necessity of providing even now some sort of standard certificate for each kind issued; for example, a standard or first grade city superintendent's certificate, a standard or first grade county superintendent's certificate, a standard or first grade high school teacher's certificate, a standard or first grade elementary school teacher's certificate. If only a few teachers in service can meet these standard requirements, there ought to be a certificate which recognizes and rewards their superior preparation. Moreover, the provision of a certificate of standard grade for each kind of certificate issued sets before the teaching body an ideal of what constitutes acceptable preparation for given kinds of school work.

Making the highest grade certificate of each kind a

standard certificate does not prevent the issuance of as many lower grade certificates of the same kind as are for the time being required in order to procure teachers for the schools. For example, since half the high school teachers in service have not had the equivalent of two years of standard college work, it will probably be necessary for the present to issue at least three different grades of high school teachers' certificates: a first grade, calling for college graduation, including special professional preparation; a second grade, calling for at least three years of standard college work, including special professional preparation; and a third grade, calling for not less than two years of standard college work, including special professional preparation. Similarly in the elementary field. Since 23 per cent. of all elementary teachers in service have themselves never gone beyond the elementary school, it will probably be necessary for a time to issue seven different grades of elementary school teachers' certificates. The requirements for these different elementary school teachers' certificates will range from those of a first grade—completion of a standard high school course and two years in a standard normal school—to those of a seventh grade certificate, which probably cannot call for more than completion of the eighth grade, with an additional six weeks of professional training.

Similar concessions must be made for the present in other kinds of certificates. To meet existing conditions, it will probably be necessary to issue three grades of city superintendents' certificates, and the same number of

county superintendents' certificates, high school principals' certificates, and elementary school principals' certificates. But no matter how many grades of certificates of each kind are issued, each lower grade should be ranked with reference to the standard certificate of the given kind.

In a sound certification scheme, all first grade or standard certificates are issued on credentials, that is, on the record of school work completed. While all first grade or standard certificates are good only for limited terms, the conditions of renewal are such as to make them practically life certificates. Lower grade or non-standard certificates are also issued, so far as practicable, on credentials, but they may also be obtained on examination, provided the applicant has had the required amount of school training when due credit is given for experience. In all cases these non-standard certificates when first issued are good only for short terms, and are renewable only on evidence of additional training in a school of recognized standard. These limitations achieve two purposes: First, young and poorly trained teachers are required to make further preparation at the beginning of their teaching careers when additional training counts most, and they are required to attend during the regular term or during the summer term standard teacher-training schools, in order to improve their technical training. Second, these limitations relieve even poorly prepared teachers of the grind of taking examination after examination. A teacher is never examined but once. When a certificate is once issued on examination, however low

the grade, it is thereafter renewed only on evidence of the completion of additional school work. The repeated renewal of a given grade of certificate on these terms inevitably leads to the next higher certificate of the same kind, which, in turn, if repeatedly renewed leads to a still higher certificate, and so on. Thus, instead of threshing over the same old straw in examination after examination, teachers are stimulated to prepare themselves more and more thoroughly, and on so doing they earn a higher wage.

When, so far as possible, all certificates are both issued and renewed on credentials, the certification of teachers is reduced primarily to grading or ranking teacher-training schools, and to auditing credentials. For all teacher-training institutions within the state, both public and private, must be ranked and their work brought up to an acceptable standard, if credentials issued by them are to be accepted. When such credentials are presented they must be audited to determine the amount and character of the credit to be allowed and the kind and grade of certificate to be granted thereon.

It also becomes incumbent on the certifying authorities to prescribe the requirements for each kind and grade of certificate. Such prescriptions should not be so definite or so rigid as to cramp the schools engaged in the preparation of teachers, but they should be definite enough to give point to all teacher-training work and to serve as a guide to teachers preparing for given certificates.

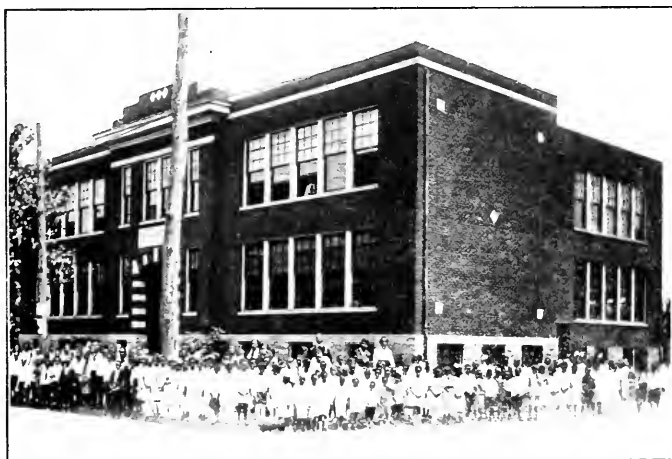
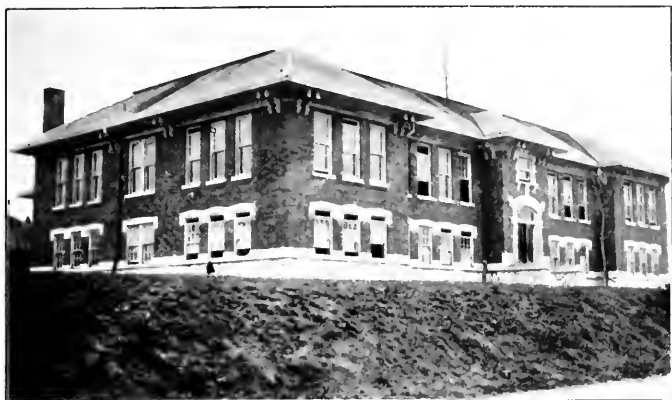
Certification having been placed on the proposed

basis, the authority to issue certificates should be centralized. Otherwise there is confusion in standards and requirements, confusion among teacher-training schools about the lines of teacher-training to attempt, and confusion among teachers as to what they should do in order to secure a certificate of a given kind and grade. Kentucky has already realized the need of centralization, for the number of certificating authorities has recently been reduced by abolishing the 120 county boards of examiners. But the present law stops short of the desired end, since the certification of all city teachers, as well as the certificating powers now exercised by both state and private institutions, should be transferred to the state. There remains a further step to complete the readjustment. The state board of examiners should be abolished, and the certification of all teachers should be vested in the state board of education. The state board of education should also be empowered, subject to the law, to fix standards, determine the kinds and grades of certificates to be issued, and to prescribe rules and regulations controlling their issuance. In the office of the state superintendent there should be established a division of teachers' certificates, and over this there should be a director, provided with an adequate number of clerks and examination readers. These measures are not new; they have been adopted with excellent results by other states, notably by Maryland and North Carolina.

However sound and efficiently administered a certification system may be, it will do little to stimulate teachers

to prepare themselves thoroughly unless it is linked up with an adequate and appropriate state minimum salary schedule. The highest wage, obviously, must go to the best trained. Moreover, the salaries of all teachers holding standard or first grade certificates, and in a few instances the salaries of those holding second and third grade certificates, should be on an annual and not on a monthly basis. A given monthly wage may in itself be attractive, but in a state where the school term is so irregular, the total amount received on the basis of a monthly wage may fall far short of making an attractive annual salary. While boards of education employing teachers holding standard certificates should not be permitted to pay them less, they should be free to pay such teachers more than the state minimum. This permits well-prepared and successful teachers to profit by their efforts and worth.

On the other hand, the wages of all teachers holding lower than standard certificates, with a few exceptions, should for the time being be stated in terms of a monthly wage. School authorities should be forbidden to pay such teachers a higher monthly wage than that specified in the state schedule. If this is not done, the way is open to all kinds of favoritism, and the whole effort to stimulate preparation by giving the best wage to the best trained breaks down. No teacher, of course, is limited forever to the specified minimum wage, but the higher salary should depend on superior training recognized by the higher grade of certificate.



Negro City Schoolhouses of Better Type



In the makeup of a state minimum teachers' salary schedule, preparation should be stressed, but experience should not be ignored. The worth of experience is, however, conditioned on the amount of preparation a teacher has previously obtained. Accordingly, for the lowest three grades of elementary school certificates no allowance should be made for experience. In all other cases the allowance for experience should vary with the amount of preparation; that is, the highest salary allowance for experience should go to the best prepared.

A certification system and state minimum teachers' salary schedule when based on the above considerations would be, for elementary teachers, approximately as follows:

| ELEMENTARY SCHOOL CERTIFICATES   | INITIAL SALARY |
|--|----------------|
| 1st Grade—Graduation from a standard normal school   | \$1,000        |
| 2nd Grade—One year in a standard normal school   | \$ 800         |
| 3rd Grade—Graduation from a standard high school, or four years beyond elementary school, and not less than 6 weeks of professional training | \$ 80 per mo.  |
| 4th Grade—Three years beyond elementary school, and not less than 6 weeks of professional training   | \$ 75 per mo.  |

| ELEMENTARY SCHOOL CERTIFICATES   | INITIAL SALARY |
|--|----------------|
| 5th Grade—Two years beyond elementary school, and not less than 6 weeks of professional training | \$ 70 per mo.  |
| 6th Grade—One year beyond elementary school, and not less than 6 weeks of professional training  | \$ 65 per mo.  |
| 7th Grade—Elementary school, and not less than 6 weeks of professional training                  | \$ 60 per mo.  |

The proposed scheme raises two questions—the practicability of the present law, which requires at least high school graduation of all elementary teachers after 1926, and the practicability of the present \$75 per month minimum salary for all elementary teachers. The law requiring high school graduation of all elementary teachers after 1926 aimed to stimulate teacher preparation. It has accomplished much, and largely accounts for the unprecedented number of Kentucky teachers in school during the summer of 1921. But with 23 per cent. of all elementary teachers now in service on the basis of only elementary school training, and with 63 per cent. having had less than high school training, the proposed requirements cannot possibly be enforced in 1926, if the schools are to be kept open. In 56 counties there are no standard high schools that prospective teachers could attend even

if they wanted to, and present salaries are not sufficient to induce them to get the required training.

Ordinarily, \$75 per month is too high a salary for the poorest trained elementary teachers, and it is not enough to encourage thorough preparation; for a minimum wage of \$75, unrelated to a salary schedule, is too apt to become the maximum wage. The adoption of a state minimum teachers' salary schedule such as suggested above would displace the present minimum of \$75 per month for teachers holding the three lowest grades of elementary school certificates, but it would hold before teachers much greater incentives for thorough preparation.

#### MORE AND BETTER TEACHER-TRAINING SCHOOLS

A sound certification system and higher salaries will increase the number of well-trained teachers, but Kentucky will never have an adequate supply of professional teachers unless more and better teacher-training schools are also created.

#### TRAINING OF HIGH SCHOOL TEACHERS

As stated above, 130 high school teachers are annually needed to take the place of those who drop out at the end of each year.<sup>1</sup> To supply this demand, the

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<sup>1</sup>This estimate does not take account of the number of qualified teachers needed to take the place of the many unprepared high school teachers now in service, or of the needed increase in the teaching force of many high schools.

state university turned out, in 1920-1921, 28 qualified graduates.

The state university under favorable conditions could easily double, if not quadruple, its output. To enable the university to do this, as well as to train educational leaders, such as high school principals, city superintendents, etc., the department of education should be converted into a college of education, on the same plane as the college of arts and sciences, the college of engineering, and the college of agriculture. It should, like them, have its own dean, its own budget, its own courses of study, its own professors, and should enroll and control its own students. In this college should be centered not only the usual work in professional education, but also work in the trades, in home economics, and in agriculture subsidized under the Smith-Hughes law. To provide a dean, the necessary increase in faculty, and to strengthen the practice schools, both at the university and at Pica-dome on the edge of Lexington, would require an increase over present expenditures of about \$25,000 annually.

In a survey of high school teacher-training resources, the private colleges of the state should also be included. These private colleges, or, rather, those belonging to the Association of Kentucky Colleges, graduated, in 1920-1921, 89 persons who had pursued some professional high school courses. Some of these graduates will undoubtedly enter private high schools, but the majority will probably find their way into public high schools. At all events, the state university and the private colleges are

now producing annually 117 high school teachers of fairly acceptable preparation, and the total annual output is rapidly increasing.

Nor are the private junior colleges to be ignored. For some years it will be necessary, as pointed out above, to certificate high school teachers who have had only two years of college work, including professional courses. Consequently, the several junior colleges of the state can render for the time being an important service in training the high school teacher of lower grade.

The state has, therefore, in prospect a fair supply of high school teachers, provided the educational work of the university is strengthened, and both university and private college students are encouraged to prepare for high school teaching through the adoption of a sound certification system carrying with it an appropriate teachers' salary schedule.

#### TRAINING OF ELEMENTARY TEACHERS

The prospect of obtaining an adequate supply of well-trained elementary teachers is not so bright. The state maintains two schools for the training of white elementary teachers—the Eastern State Normal School at Richmond and the Western State Normal School at Bowling Green. As stated above, approximately 1450 elementary teachers are needed annually to take the place of those who quit teaching each year.<sup>1</sup> To meet this demand, the two

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<sup>1</sup>The estimate does not take account of the number needed to displace gradually the 2,108 now in service who have never advanced beyond the

state normal schools graduated from their advanced courses in 1920-1921, 114 prospective teachers, a half of whom were headed for high school positions.

Educational conditions are now such that with proper reorganization and concentration of resources, these two schools can do more for the elementary schools than they have heretofore been able to do. But if they are to accomplish this large work, their entrance requirements should be raised so as to exclude all pupils who have not completed the elementary school. Students who merely want a high school education should also be excluded, for these institutions are teacher-training schools, not high schools and not colleges. The present separate and disjointed courses—the elementary, the intermediate, the advanced—should be abandoned. For elementary school entrants, there should be developed a single unified course, covering five years of forty weeks each, with opportunities in the last year or two to specialize in primary, intermediate, and grammar grade work. For high school entrants, there should be developed a two-year course, with similar opportunities for specialization, in great part independent of the courses for elementary school entrants.

But these two normal schools, when fully developed, will together probably not graduate, in any one year, more than 400 well-trained teachers. At that rate, it would take the output of seven such fully developed nor-

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elementary school, or to displace gradually the 3,679 who have had some high school work but less than a full high school course, nor does it consider expansion due to increased population.

mal schools merely to fill the places of teachers who annually leave the service. To establish five new state normal schools at one stroke would be ill advised, but the next general assembly should make a beginning by establishing at least one, and preferably two.

The new schools should be put where they will do the most good. One should probably be located in the Big Sandy Valley, the other in the western part of the state, east of the Tennessee River. Under no circumstances should they at the outset be standard normal schools. They should be designed to prepare teachers for the rural schools of the respective sections. A simple, single course of study not more than three years in length for elementary school entrants would for the present suffice; but the course should be thorough as far as it goes and should from first to last be controlled by the needs of rural school teachers. A graduate desiring to advance further should be admitted at Richmond or Bowling Green, and should be able to complete an advanced course in two years.

All high school graduates in the territory of these new schools should go to Richmond or Bowling Green. In turn, Richmond and Bowling Green should exclude all students coming from the fields of the new schools who have had less than a full high school course. This arrangement would work a double benefit. It would enable the new schools to keep to a simple, rural school course. On the other hand, it would relieve the two older schools of a part of their large enrollment of pupils entering directly from the elementary school, increase the

proportion of high school entrants, and enable them to devote their resources more exclusively to advanced elementary teacher training.

In both the eastern and western sections, there may be a private school, favorably located, which the board of management would gladly turn over to the state for normal school purposes. In that event, the first cost of establishing these two new schools would be small. If they must be built new from the ground up, it will probably require not less than \$150,000 each for buildings and \$30,000 each annually for maintenance and operation.

Such normal schools as Kentucky may establish and maintain at this time cannot reach the great mass of rural teachers now in service, or the mass of prospective rural teachers. To reach these and to give them at least some training, it will be necessary for Kentucky, like other states, to employ temporary means of teacher training, such as county summer schools for teachers and teacher-training departments in high schools.

County summer schools for teachers were introduced in Kentucky in the summer of 1921, with great success. They should not only be continued, but increased in number. To avoid confusion in standards and organization, courses of study and methods of instruction, the control of these summer schools should be vested in the state board of education. This is especially necessary since credit on certificates should be given for all work completed in them. The state board of education should

also be furnished with a fund sufficient to enable it, in coöperation with county school authorities, to establish such a school wherever needed, without cost to the teachers attending. The cost to the state of such a school will probably never exceed \$900 per annum. In most cases it will not exceed \$450, as counties will gladly share the expense with the state.

If the county summer school is made an established part of the state's teacher-training facilities, the annual county institute of not more than six days should be abolished. It no longer serves a useful purpose. The abandonment of the county institute should, however, not prevent the county superintendent from calling his teachers together from time to time for conference and instruction.

Most Kentucky rural high schools are now too small to make profitable the establishment in them of teacher-training departments. There are, however, a few where this could be done to advantage. These departments would enable rural boys and girls who expect to teach to spend half time in their third and fourth years in work designed to fit them for rural school teaching.<sup>1</sup> Like the county summer schools for teachers, high school training departments should be under the control of the state board of education. Such a department costs approxi-

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<sup>1</sup>See a study entitled "Teacher Training Departments in Minnesota High Schools" published by the General Education Board, 61 Broadway, New York, and sent free on application.

mately \$2,500 per year. County boards of education usually provide the needed classrooms, and divide the expense of maintenance with the state.

For the conduct of county summer schools and the establishment of high school teacher-training departments, the next general assembly should appropriate \$50,000 for each of the next two years. No other appropriation of equal amount will reach so many rural teachers and affect favorably so many rural children.

#### TRAINING OF COLORED TEACHERS

The problems facing the State Normal and Industrial Institute at Frankfort are somewhat similar to those facing Richmond and Bowling Green. The time has come for this school to exclude all pupils who have not completed the elementary school. As there are now only 28 public high schools for colored children in the state, a high school course should be maintained for pupils not expecting to teach. But pupils expecting to teach should not be required as now to complete a three-year classical high school course before being admitted to the regular normal school course. For such elementary school entrants, there should be outlined a single, continuous five- or six-year course determined entirely by the needs of elementary school teachers. A separate teacher-training course should also be maintained for high school entrants. To make the needed changes in courses of study for teachers, to provide more extensive practice school opportunities, and to strengthen the faculty which

is now inadequate, will require an increased annual appropriation for current maintenance and operation of not less than \$20,000.

The situation at the West Kentucky Industrial College at Paducah is different. Outside the farm recently purchased, the assets of the West Kentucky Industrial College consist of a small lot and a three-story brick building. The building is poorly constructed and of the cheapest material. The basement is used for a kitchen and dining room; the first floor for the principal's offices and classrooms; the second floor for the principal's home and classrooms; and the third floor for a girls' dormitory. Its wooden joists and floors, and its pine and beaver board stairways and partitions, constitute a fire hazard of the most dangerous sort.

The program advertised covers the eight grades of the elementary school, a three-year high school course, a three-year normal school course based on a three-year high school course, a business course of indefinite length, and miscellaneous courses in public school music and piano. The normal school course as such is a myth. Such teacher training as is undertaken consists chiefly of review courses and a summer school for teachers. The total enrollment for the spring term 1920-1921 was, elementary grades, 100; high school grades, 48.

The school is managed almost as if it were a private enterprise. A tuition fee of \$8 per term is charged, with registration and laboratory fees. The principal also solicits private subscriptions and apparently has little

appreciation of his relations to the state. The accounts and records of the school are in a deplorable condition.

This school should be abandoned in favor of a new school to be established near the western center of colored population at a probable cost of \$100,000 for building, and \$20,000 per year for current expenses. If a new school is not established, the state should stop its appropriation to the West Kentucky Industrial College, sell the farm, and return the property originally deeded to the state to its former owner, the principal of the school.

#### ADMINISTRATION OF TEACHER-TRAINING SCHOOLS

Teacher-training schools are an indispensable part of a public school system, and they should be under the same general management as the public schools themselves—a properly constituted state board of education.

Kentucky recognizes the necessity of this central control. The state superintendent is chairman of the managing boards of the two white normal schools, also chairman of the managing board of the colored normal school at Frankfort. It remains to make this central control more direct and complete. It may not be practicable at this time to bring the Eastern and Western State Normal Schools under the control of the state board of education, but the management of the colored normal schools and such new normal schools as may be established should be brought under its control. Each school should still have its own president, but he should be ap-



Main Building and Practice School of West Kentucky Industrial College



pointed by and be responsible to the state board of education.

To bring all normal schools under a single management will give unity to all state teacher-training work, whether in normal schools, county summer schools for teachers, or high school training departments; it will keep each school to the task for which it was established, relieve these institutions from local interference which all too often leads them into ill-advised fields of endeavor, and prevent unnecessary duplication and unprofitable rivalry.

#### SUMMARY

The recommendations made in this chapter may seem drastic; but this is due to the fact that the present situation is hopelessly confused. As a matter of fact, the above suggestions are based on successful experience in other states and simply adapt to Kentucky measures already taken elsewhere. Recent sessions of the North Carolina legislature have, for example, put through a program similar to the one outlined for Kentucky. Separate boards for the smaller normal schools were abolished, a new certification system and state teachers' salary schedule adopted, and teacher-training facilities increased. Within the last six years Maryland has done likewise. What these states have done, Kentucky can do.

### XIII. BETTER FINANCIAL SUPPORT

**E**DUCATIONAL progress in Kentucky is absolutely dependent on increased financial support. More money is needed for administration and supervision, more money for grounds, buildings, and equipment, more money for teachers and teacher-training institutions. In short, practically every improvement needed involves increased outlay.

#### INCREASED APPROPRIATIONS FROM THE GENERAL TREASURY

Because of constitutional limitations and appellate court decisions, certain of the proposed improvements, such as additional teacher-training facilities, can only be financed through appropriations by the general assembly from the general treasury.

To strengthen present teacher-training institutions and to provide additional teacher-training facilities imperatively needed, the general assembly of 1922 should appropriate for new buildings, grounds, and equipment not less than \$650,000. This appropriation should be distributed approximately as follows:

\$125,000 each to the Eastern Kentucky and Western Kentucky State Normal Schools;

\$150,000 each for two new normal schools for white teachers, to be located preferably in the eastern and western sections of the state; and

\$100,000 for a new normal school for the training of colored teachers, to be located in the center of Negro population in the western part of the state.

The general assembly of 1922 should also appropriate, in addition to present appropriations, for the current maintenance and operation of teacher-training institutions, not less than \$175,000 annually, to be distributed about as follows:

\$25,000 for enlarging and improving the teacher-training work of the state university;

\$30,000 each for maintaining and operating the two new normal schools for white teachers;

\$50,000 to enable the state to establish, in coöperation with the counties, summer training schools for teachers, and to establish teacher-training departments in county high schools;

\$20,000 for enlarging and improving the work of the Kentucky Normal and Industrial Institute, located at Frankfort; and

\$20,000 for the current expenses of the new state normal school for colored teachers, to be established.

These appropriations will not provide adequately for the training of teachers. At no distant date, additional provisions will be required for the training of high school teachers, and from four to six additional institutions will be required for the training of elementary teachers

Nevertheless, the appropriations suggested will meet the most pressing teacher-training needs, and that is all that can be attempted at this time.

#### INCREASED STATE AND LOCAL SCHOOL SUPPORT

Other improvements, such as better school grounds, buildings, and equipment, better trained teachers, longer school term, can be financed only through the state common school fund and local taxation. How much these respective funds will need to be increased to provide Kentucky with satisfactory schools, no one can tell. But we can estimate approximately how much they will have to be increased to raise Kentucky school expenditures up to the country-wide average. In view of its traditions, its wealth, and the character of its people, Kentucky cannot possibly be content with less.

Rural school expenditures were, in 1920-1921, approximately \$5,000,000. To bring these up to the country-wide average will call for an annual expenditure of \$10,000,000, or an increase of \$5,000,000. The state should at least divide with the counties the expense that has to be incurred to provide better schools. To do so would call for an addition to the common school fund of approximately \$2,500,000 for rural school purposes alone. Similarly, to bring the city and graded school expenditures up to the country-wide city average will require an annual expenditure of \$6,650,000, or an increase over present expenditures of \$1,650,000. Should the state bear the same proportion of this in-

crease as is proposed for the counties, this will involve increasing the common school fund by \$825,000, or a total increase for both cities and counties of \$3,325,000. If the state school fund should thus be practically doubled, under the present method of distribution, approximately \$1,050,000 will go to the cities and graded school districts instead of \$825,000. Accordingly, if they did their full share, the expenditures of cities and graded school districts would exceed somewhat the country-wide city average, whereas the counties, owing to the decreased proportion of the increase in the common school fund going to them, would, even if they did their full share, fall slightly short of the country-wide rural average.

If the counties are to do their part in raising rural school expenditures to the country-wide rural average, county school taxes will need to be increased on the average at least 50 per cent. Part of this increase should be made mandatory, part of it should be left optional with the counties. To this end, the present mandatory county school tax of 25 cents on each \$100 value of assessed property should be raised to 35 cents for teachers alone, and the maximum which a county board of education may levy for all purposes should be raised to \$1.00.

To increase the mandatory county school tax levy to 35 cents for teachers will in many instances scarcely crystallize present practice. Thirty-nine counties now levy for all purposes 50 cents, ten, 45 cents, and twenty-

six, 40 cents. A few of the less favored counties still think they are too poor to levy a reasonable school tax, but the lower tax rate is often found in wealthy counties, and these same wealthy counties are content with poor schools and a short school term. If a 35-cent school tax rate for teachers alone becomes mandatory, then the standard school term should be made not less than 180 days or 9 months, exclusive of holidays. But no county should be compelled to levy a school tax in excess of 35 cents for teachers to maintain a term of this length. Such legislation would, however, provide a standard school term—a term of not less than 9 months—in probably 40 counties.

On the other hand, in approximately 80 counties a 35-cent school tax for teachers will not provide a standard school term. In some counties it will scarcely suffice for a six months' term; in others, for only seven months, and in still others for eight months. Therefore, when a county levies a 35-cent school tax for teachers, it would be well if the state could step in and supplement local funds to the extent needed to provide the children of the county with a school term of standard length. The constitution prevents any such equalization of educational opportunities. Consequently, even if the mandatory county school tax is raised to 35 cents for teachers, many counties will continue to have a short school term.

To some persons an optional maximum county school tax rate of \$1.00 may seem high. But there is probably

not a county in the state that can maintain schools of good standard on a lower rate. Moreover, county school boards will not as a rule levy a higher optional school tax than public sentiment will sustain. To provide an optional school tax levy between 35 cents and \$1.00 will give progressive counties a chance to forge ahead, and thus other counties will be stimulated to support their schools more generously.

To bring their school expenditures up to the country-wide city average, it will be necessary for cities and graded districts to increase their school taxes, on the average, approximately one-sixth. Third and fourth class cities now have ample taxing power to enable them to raise the needed increased revenues. First and second class cities and graded school districts should be similarly empowered. In most instances public sentiment is strong enough to sustain the higher levies.

Even if the state should take as its immediate objective raising the usual school expenditures up to the country-wide rural average, and city and graded school expenditures to the country-wide city average, it would not be advisable, even if it were possible, to double the state common school fund at one stroke, or to double immediately the average county school tax, or to increase the average of city and graded school taxes too abruptly. Except as additional funds are needed to lengthen the school term and to employ better trained teachers, superintendents, and supervisors, too sudden an increase in school revenues would be unfortunate.

## USE OF TEN PER CENT. DEDUCTION

The approval by the people of the second constitutional amendment now before them will free annually about \$450,000, which can be apportioned without regard to school population. Unquestionably, this liberated fund should be used to do away, so far as possible, with existing educational inequalities.

Educational inequalities arise chiefly from differences in leadership as exercised by superintendents and supervisors, differences in school grounds, buildings, and equipment, differences in the training of the teachers employed, differences in length of term, and differences in the kind and grade of schools provided, according as children have access to both elementary and high schools or to elementary schools only. A fund many times larger than that liberated by the proposed 10 per cent. deduction from the common school fund would be required to eliminate all the inequalities arising from differences in these factors. It is therefore a question of choosing the particular inequalities to eradicate with the funds available.

Of all existing inequalities, no others are so significant as differences in length of term, in the training of the teachers employed, and in high school opportunities. Therefore, two-thirds of the funds available can best be used to equalize length of school term, if possible up to seven months, and to equalize the salaries and the training of the teachers employed. The remainder can

best be used to equalize high school opportunities to the point of establishing one standard rural high school in each county of the state. These liberated funds can be used, of course, in the light of past appellate court decisions, only for paying teachers' salaries.

The conditions on which the several counties may participate in the distribution of these liberated funds should be as follows: Each county must levy at least a 50-cent county school tax. Of this, not less than 35 cents should be set aside for teachers' salaries. Having done this, each county should then participate according to its needs and the amount of the liberated fund available, provided it is still unable to maintain the legal minimum term, pay its teachers the legal minimum wage, and maintain at least one standard rural high school. But no county should participate to the extent of providing an elementary school term longer than seven months, or salaries above the state standard, or more than one standard rural high school. It should also be provided that all unexpended portions of this liberated fund be covered at the end of each school year into the common school fund.

Even with a 50-cent county school levy, 35 cents of which is set aside for teachers, about 40 counties will not be able to provide a school term in excess of six months. What it will cost to extend the term in these 40 counties to seven months, thus making a seven months' term common throughout the state, cannot be exactly stated.

It would probably cost about \$300,000. The exact cost to the state will ultimately depend on the amount available in each county from a 50-cent school levy, when 35 cents is set aside for teachers' salaries, and on the number, training, and experience of the teachers employed. For the salaries paid teachers will depend on the state certification system and the state teachers' salary schedule finally adopted. But whatever the cost, this is, we believe, the best use that can be made of the first two-thirds of the funds liberated, not only because length of school term appears at present from all data in hand to be the most important factor in determining the school achievements of children, but also for the following additional reason:

In a state having a sound certification system, and a sound teachers' salary schedule, such as Kentucky should adopt, the poorest prepared and least experienced teacher would get the lowest salary, and the best trained and most experienced teacher, the highest salary. Under these conditions, counties having only a six months' term cannot employ as well trained teachers as counties having a standard or nine months' term, or even as counties having a seven or eight months' term. Such counties cannot pay the salaries well-trained teachers are entitled to, and well-trained and experienced teachers will not accept six months' appointments. In general, the county having the shortest term has the poorest trained and the least experienced teachers. Therefore, to extend the school term to seven months in all less fa-

vored counties will place these counties on an equal footing in the employment of teachers with all other counties having a seven months' term. They will thus be able, through the aid of the state, to employ somewhat better prepared and more experienced teachers, who, in turn, will react favorably on the classroom work in these less favored counties. Hence, to equalize the length of the school term is also a step toward equalizing the quality of instruction. Likewise, a longer term and higher salaries will encourage the young people of these less favored counties to prepare themselves more thoroughly for teaching.

It is equally impossible to state what it will cost to provide one standard rural high school in each of the 56 counties that either have no high school at all or no high school of standard grade. A 50-cent county tax levy will enable some of these counties, without special state aid, to improve their high schools. In others the state will probably not find it necessary to contribute more than a half of the instructional cost, while in a few counties it will be necessary to contribute for a time most of the cost.

The total instructional cost of a small standard rural high school is approximately \$6,800, from which may be deducted \$1,000 received from Smith-Hughes funds.<sup>1</sup>

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<sup>1</sup>This estimate provides for three teachers of the usual high school studies, and for two teachers for home economics, agriculture, and rural science.

This leaves the local cost for teachers' salaries approximately \$5,800. Even if the state were called on to contribute, on the average, one-half of this amount, or \$2,900, it would be able, with \$150,000 at its command, to assist not less than 52 counties, and probably more. A third of the proposed 10 per cent. deduction will, therefore, go a long way toward equalizing high school opportunities up to at least one standard rural high school in each county of the state. To establish even a single standard rural high school in each of the less favored counties will do much to stimulate the mental life of these communities, and will sooner or later lead to the establishment of still other high schools by the people themselves; without at least one such high school in each county, the improvement of their teachers will be slow indeed.

As the common school fund increases, the amount liberated under a 10 per cent. deduction will increase correspondingly. Even this increased amount will probably never be sufficient to equalize entirely the length of school term and high school opportunities. A sum much larger would be necessary to eradicate many other inequalities, such, for example, as differences in administrative and supervisory efficiency, and differences in the training of the teachers employed. Nevertheless, to reduce at this time, even to a limited extent, existing inequalities in school opportunities is simple justice and will confer inestimable benefits on the rural children of the less favored counties. But nothing at all can be

done because the people failed to ratify Constitutional Amendment Number Two.

#### SCHOOL BUDGETS AND SCHOOL ACCOUNTING

Finally, the ordinary increases in public expenditures, to say nothing of the other necessary increases, require greater care in the preparation of school budgets. Cities have given considerable attention to their school budgets, and the law of 1920 requires a county school budget; but many cities, most graded school districts, and the state department of education have never had budgets. Aside from specific appropriations for the state superintendent's salary and for clerical hire, the amount of the remaining expenses of the department is undetermined, being carried in an open account.

In addition to providing the state department of education with inspectors to supervise the making of budgets, the accounting and the business methods of local boards of education, the auditor of public accounts should be furnished with such inspectors as will enable him to keep close watch on the integrity with which public school funds are handled. Such supervision of financial responsibilities, and of the accounting and business methods of boards of education, will save annually thousands of dollars of public funds now lost through petty graft and inefficiency, correspondingly reduce the cost of the schools, and greatly increase the confidence of the people in their management.

The state will perhaps be startled by the preceding suggestions, all involving greater expenditures. But let us pause to consider. The tide of prosperity does not rise in countries that pay little for education, it rises in those that pay much. A vigorous and industrious population does not seek a state which has poor schools; it seeks a state which has good schools. Having so far done less than it should, and less than it could afford, let Kentucky by a supreme effort now do at least what it can afford. The returns will be prompt and large. Such action is recommended not only by statesmanship, but by enlightened selfishness, if one must have a lower justification.

# APPENDIX

TABLE I  
TRAINING OF WHITE ELEMENTARY TEACHERS

| TRAINING                   | RURAL |      | GRADED |      | CITY  |      | TOTAL |      |
|----------------------------|-------|------|--------|------|-------|------|-------|------|
|                            | No.   | %    | No.    | %    | No.   | %    | No.   | %    |
| Elementary School Only.    | 1,975 | 29.9 | 79     | 10.3 | 54    | 3.1  | 2,108 | 23.1 |
| Less than full High School | 3,095 | 46.9 | 304    | 39.8 | 280   | 15.9 | 3,679 | 40.3 |
| Full High School . . .     | 1,156 | 17.5 | 244    | 31.9 | 382   | 21.6 | 1,782 | 19.5 |
| Above High School          |       |      |        |      |       |      |       |      |
| 1 year . . . . .           | 209   | 3.2  | 75     | 9.8  | 347   | 19.7 | 631   | 6.9  |
| 2 years . . . . .          | 112   | 1.7  | 40     | 5.2  | 449   | 25.4 | 601   | 6.6  |
| 3 years . . . . .          | 30    | .5   | 14     | 1.8  | 151   | 8.5  | 195   | 2.2  |
| 4 years or more . . .      | 19    | .3   | 9      | 1.2  | 102   | 5.8  | 130   | 1.4  |
| Total . . . . .            | 6,596 | 100  | 765    | 100  | 1,765 | 100  | 9,126 | 100  |

TABLE II  
TRAINING OF WHITE HIGH SCHOOL TEACHERS

| TRAINING                   | RURAL |      | GRADED |      | CITY |      | TOTAL |      |
|----------------------------|-------|------|--------|------|------|------|-------|------|
|                            | No.   | %    | No.    | %    | No.  | %    | No.   | %    |
| Elementary School Only.    | 45    | 10.2 | 23     | 5.3  | 16   | 2.8  | 84    | 5.8  |
| Less than full High School | 108   | 24.4 | 63     | 14.6 | 42   | 7.4  | 213   | 14.8 |
| Full High School . . .     | 116   | 26.3 | 90     | 20.8 | 42   | 7.4  | 248   | 17.2 |
| Above High School          |       |      |        |      |      |      |       |      |
| 1 year . . . . .           | 47    | 10.6 | 67     | 15.5 | 58   | 10.2 | 172   | 11.9 |
| 2 years . . . . .          | 46    | 10.4 | 82     | 18.9 | 78   | 13.7 | 206   | 14.3 |
| 3 years . . . . .          | 38    | 8.6  | 49     | 11.3 | 102  | 18.0 | 189   | 13.1 |
| 4 years or more . . .      | 42    | 9.5  | 59     | 13.6 | 230  | 40.5 | 331   | 22.9 |
| Total . . . . .            | 442   | 100  | 433    | 100  | 568  | 100  | 1,443 | 100  |

TABLE III  
TRAINING OF COLORED TEACHERS

| TRAINING                   | RURAL |      | CITY |      | TOTAL |      |
|----------------------------|-------|------|------|------|-------|------|
|                            | No.   | %    | No.  | %    | No.   | %    |
| Elementary School Only.    | 73    | 11.1 | 9    | 1.8  | 82    | 7.2  |
| Less than full High School | 226   | 34.5 | 72   | 14.8 | 298   | 26.1 |
| Full High School . . .     | 154   | 23.5 | 86   | 17.6 | 240   | 21.0 |
| Above High School          |       |      |      |      |       |      |
| 1 year . . . . .           | 87    | 13.3 | 63   | 12.9 | 150   | 13.1 |
| 2 years . . . . .          | 70    | 10.7 | 129  | 26.4 | 199   | 17.4 |
| 3 years . . . . .          | 18    | 2.8  | 57   | 11.7 | 75    | 6.6  |
| 4 years or more . . .      | 27    | 4.1  | 72   | 14.8 | 99    | 8.6  |
| Total . . . . .            | 655   | 100  | 488  | 100  | 1,143 | 100  |

TABLE IV  
NUMBER AND PER CENT. OF KENTUCKY PUPILS IN SUB-DISTRICT, GRADED DISTRICT, AND CITY SCHOOLS WHO ARE UNDER AGE, OVER AGE, AND OF NORMAL AGE

| KIND OF SCHOOL  | UNDER AGE |     | NORMAL AGE |      | OVER AGE        |      |                  |      |                  |      |                  |     |                |      | TOTAL<br>NUMBER<br>OF<br>PUPILS |        |
|-----------------|-----------|-----|------------|------|-----------------|------|------------------|------|------------------|------|------------------|-----|----------------|------|---------------------------------|--------|
|                 | Number    | %   | Number     | %    | Less than 1 yr. |      | From 1 to 2 yrs. |      | From 2 to 3 yrs. |      | From 3 to 4 yrs. |     | 4 yrs. or more |      |                                 |        |
|                 |           |     |            |      | Number          | %    | Number           | %    | Number           | %    | Number           | %   | Number         | %    |                                 | Number |
| <i>White</i>    |           |     |            |      |                 |      |                  |      |                  |      |                  |     |                |      |                                 |        |
| Sub-district .  | 1,209     | 7.8 | 5,134      | 33.3 | 3,066           | 19.9 | 2,416            | 15.7 | 1,711            | 11.1 | 1,015            | 6.6 | 859            | 5.6  | 9,067                           | 58.9   |
| Graded district | 2,368     | 6.3 | 15,230     | 40.3 | 8,087           | 21.4 | 5,452            | 14.4 | 3,379            | 9.0  | 1,825            | 4.8 | 1,431          | 3.8  | 20,174                          | 53.4   |
| City . . . .    | 2,729     | 4.2 | 32,294     | 49.1 | 15,192          | 23.1 | 8,155            | 12.4 | 4,223            | 6.4  | 1,879            | 2.9 | 1,244          | 1.9  | 30,693                          | 46.7   |
| Total White     | 6,306     | 5.3 | 52,658     | 44.3 | 26,345          | 22.1 | 16,023           | 13.5 | 9,313            | 7.8  | 4,719            | 4.0 | 3,534          | 3.0  | 59,934                          | 50.4   |
| <i>Negro</i>    |           |     |            |      |                 |      |                  |      |                  |      |                  |     |                |      |                                 |        |
| Rural . . .     | 149       | 7.6 | 500        | 25.6 | 333             | 17.1 | 317              | 16.2 | 226              | 11.6 | 180              | 9.2 | 247            | 12.7 | 1,303                           | 66.8   |
| City . . .      | 510       | 3.2 | 4,747      | 29.7 | 3,517           | 22.0 | 2,701            | 16.9 | 2,052            | 12.8 | 1,243            | 7.8 | 1,206          | 7.6  | 10,719                          | 67.1   |
| Total Negro     | 659       | 3.7 | 5,247      | 29.3 | 3,850           | 21.5 | 3,018            | 16.8 | 2,278            | 12.7 | 1,423            | 7.9 | 1,453          | 8.1  | 12,022                          | 67.0   |

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KIND OF  
SCHOOL

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*White*

- 1 Teacher . . .
- Sub-district .
- Graded . . .
- 2 Teacher . . .
- Sub-district .
- Graded . . .
- 3 Teacher . . .
- Sub-district .
- Graded . . .
- 4 Teacher . . .
- Sub-district .
- Graded . . .
- 5 Teacher . . .
- Sub-district .
- Graded . . .
- 6 Teacher or more
- Sub-district .
- Graded . . .
- 4 Teacher or more
- Sub-district and
- Graded . . .

*City*

- 4th Class . . .
- 3d Class . . .
- 2d Class . . .
- Lexington .
- Newport .
- Paducah .

*Negro*

- Sub-district .
  - City . . .
-



TABLE V

NUMBER AND AGES OF PUPILS TESTED AND THE AVERAGE LENGTH OF THE SCHOOL YEAR IN THE VARIOUS SCHOOLS IN WHICH TESTS WERE GIVEN

| KIND OF SCHOOL    | NUMBER OF PUPILS TESTED |         |       |               |         |       |              |         |       | MEDIAN AGES OF PUPILS TESTED |           |           |               |           |           |              |           |           | AVERAGE LENGTH OF SCHOOL YEAR IN DAYS |
|-------------------|-------------------------|---------|-------|---------------|---------|-------|--------------|---------|-------|------------------------------|-----------|-----------|---------------|-----------|-----------|--------------|-----------|-----------|---------------------------------------|
|                   | Fifth Grade             |         |       | Seventh Grade |         |       | Eighth Grade |         |       | Fifth Grade                  |           |           | Seventh Grade |           |           | Eighth Grade |           |           |                                       |
|                   | 1st half                | 2d half | Total | 1st half      | 2d half | Total | 1st half     | 2d half | Total | 1st half                     | 2d half   | Total     | 1st half      | 2d half   | Total     | 1st half     | 2d half   | Total     |                                       |
| White             |                         |         |       |               |         |       |              |         |       | yrs. mos.                    | yrs. mos. | yrs. mos. | yrs. mos.     | yrs. mos. | yrs. mos. | yrs. mos.    | yrs. mos. | yrs. mos. |                                       |
| 1 Teacher . . .   |                         |         | 1,550 |               |         | 925   |              |         | 472   |                              |           | 12-7      |               |           | 14-4      |              |           | 14-7      | 129                                   |
| Sub-district . .  |                         |         | 1,540 |               |         | 909   |              |         | 472   |                              |           | 12-7      |               |           | 14-4      |              |           | 14-11     | 129                                   |
| Graded . . .      |                         |         | 10    |               |         | 16    |              |         |       |                              |           | 11-7      |               |           | 14-7      |              |           | ...       | 131                                   |
| 2 Teacher . . .   |                         |         | 170   |               |         | 137   |              |         | 100   |                              |           | 12-1      |               |           | 14-1      |              |           | 15-0      | 142                                   |
| Sub-district . .  |                         |         | 139   |               |         | 112   |              |         | 84    |                              |           | 12-2      |               |           | 14-4      |              |           | 14-9      | 143                                   |
| Graded . . .      |                         |         | 31    |               |         | 25    |              |         | 16    |                              |           | 11-9      |               |           | 13-1      |              |           | 15-3      | 138                                   |
| 3 Teacher . . .   |                         |         | 204   |               |         | 147   |              |         | 175   |                              |           | 12-2      |               |           | 13-10     |              |           | 14-10     | 159                                   |
| Sub-district . .  |                         |         | 129   |               |         | 88    |              |         | 109   |                              |           | 12-4      |               |           | 14-0      |              |           | 15-0      | 156                                   |
| Graded . . .      |                         |         | 75    |               |         | 59    |              |         | 66    |                              |           | 11-10     |               |           | 13-7      |              |           | 14-7      | 163                                   |
| 4 Teacher . . .   |                         |         | 190   |               |         | 152   |              |         | 138   |                              |           | 11-8      |               |           | 13-4      |              |           | 14-8      | 167                                   |
| Sub-district . .  |                         |         | 91    |               |         | 70    |              |         | 65    |                              |           | 11-7      |               |           | 13-5      |              |           | 14-10     | 166                                   |
| Graded . . .      |                         |         | 99    |               |         | 82    |              |         | 73    |                              |           | 11-9      |               |           | 14-3      |              |           | 14-7      | 167                                   |
| 5 Teacher . . .   |                         |         | 117   |               |         | 79    |              |         | 65    |                              |           | 11-8      |               |           | 13-8      |              |           | 14-9      | 170                                   |
| Sub-district . .  |                         |         |       |               |         |       |              |         |       |                              |           |           |               |           |           |              |           |           |                                       |
| Graded . . .      |                         |         | 117   |               |         | 79    |              |         | 65    |                              |           | 11-8      |               |           | 13-8      |              |           | 14-9      | 170                                   |
| 6 Teacher or more |                         |         | 134   |               |         | 114   |              |         | 75    |                              |           | 11-7      |               |           | 13-5      |              |           | 14-0      | 178                                   |
| Sub-district . .  |                         |         | 30    |               |         | 22    |              |         | 18    |                              |           | 12-3      |               |           | 14-1      |              |           | 13-7      | 160                                   |
| Graded . . .      |                         |         | 104   |               |         | 92    |              |         | 57    |                              |           | 11-5      |               |           | 13-3      |              |           | 14-4      | 180                                   |
| 4 Teacher or more |                         |         |       |               |         |       |              |         |       |                              |           |           |               |           |           |              |           |           |                                       |
| Sub-district and  |                         |         |       |               |         |       |              |         |       |                              |           |           |               |           |           |              |           |           |                                       |
| Graded . . .      |                         |         | 441   |               |         | 345   |              |         | 278   |                              |           | 11-8      |               |           | 13-5      |              |           | 14-7      | 171                                   |
| City . . .        | 1,353                   | 671     | 2,024 | 1,182         | 465     | 1,647 | 1,004        | 307     | 1,311 | 11-0                         | 11-8      | 11-3      | 12-10         | 13-5      | 13-0      | 13-10        | 14-2      | 13-10     | 193                                   |
| 4th Class . . .   | 445                     | 34      | 479   | 364           | 38      | 402   | 339          | 11      | 350   | 11-0                         | 12-1      | 11-1      | 12-11         | 13-1      | 13-10     | 12-11        | 13-9      | 14-6      | 191                                   |
| 3d Class . . .    | 463                     | 171     | 634   | 404           | 83      | 487   | 340          | 48      | 388   | 11-0                         | 11-6      | 11-3      | 12-10         | 13-10     | 12-11     | 13-9         | 14-6      | 13-10     | 186                                   |
| 2d Class . . .    | 445                     | 466     | 911   | 414           | 344     | 758   | 325          | 248     | 573   | 11-0                         | 11-8      | 11-5      | 12-10         | 13-4      | 13-1      | 13-9         | 14-2      | 13-11     | 200                                   |
| Lexington . . .   | 121                     | 196     | 317   | 157           | 122     | 279   | 148          | 81      | 229   | 11-8                         | 12-4      | 12-0      | 13-1          | 13-7      | 13-4      | 13-10        | 14-7      | 14-2      |                                       |
| Newport . . .     | 174                     | 150     | 324   | 124           | 100     | 224   | 76           | 94      | 170   | 11-0                         | 11-1      | 11-0      | 12-9          | 13-0      | 12-9      | 13-8         | 13-7      | 13-7      |                                       |
| Paducah . . .     | 150                     | 120     | 270   | 133           | 122     | 255   | 101          | 73      | 174   | 10-7                         | 11-5      | 10-11     | 12-8          | 13-2      | 12-11     | 13-9         | 14-0      | 13-9      |                                       |
| Negro             |                         |         |       |               |         |       |              |         |       |                              |           |           |               |           |           |              |           |           |                                       |
| Sub-district . .  |                         |         | 141   |               |         | 66    |              |         | 59    |                              |           | 12-11     |               |           | 14-10     |              |           | 15-9      | 137                                   |
| City . . .        | 269                     | 101     | 370   | 198           | 45      | 243   | 179          | 46      | 225   | 12-6                         | 12-9      | 12-6      | 13-10         | 14-4      | 13-11     | 14-10        | 15-3      | 14-10     | 193                                   |



TABLE VI

SUMMARY OF ELEMENTARY SCHOOL READING SCORES<sup>1</sup> IN KENTUCKY AND SIMILAR SCORES FOR NORTH CAROLINA AND VIRGINIA

| KIND OF SCHOOL     | KENTUCKY    |         |       |               |         |       | NORTH CAROLINA <sup>2</sup> |         |       |               |         |       | VIRGINIA <sup>2</sup> |         |               |       |
|--------------------|-------------|---------|-------|---------------|---------|-------|-----------------------------|---------|-------|---------------|---------|-------|-----------------------|---------|---------------|-------|
|                    | Fifth Grade |         |       | Seventh Grade |         |       | Fifth Grade                 |         |       | Seventh Grade |         |       | Fifth Grade           |         | Seventh Grade |       |
|                    | 1st half    | 2d half | Total | 1st half      | 2d half | Total | 1st half                    | 2d half | Total | 1st half      | 2d half | Total | 1st half              | 2d half | Total         | Total |
|                    |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| <i>White</i>       |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| 1 Teacher . . .    |             |         | 37.0  |               |         | 44.5  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 37.0  |               |         | 44.5  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 37.8  |               |         | 46.8  |                             |         |       |               |         |       |                       |         |               |       |
| 2 Teacher . . . .  |             |         | 38.1  |               |         | 45.0  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 38.2  |               |         | 45.4  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 37.5  |               |         | 43.4  |                             |         |       |               |         |       |                       |         |               |       |
| 3 Teacher . . . .  |             |         | 38.3  |               |         | 45.2  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 36.9  |               |         | 45.3  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 40.8  |               |         | 45.1  |                             |         |       |               |         |       |                       |         |               |       |
| 4 Teacher . . . .  |             |         | 38.9  |               |         | 47.0  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 39.1  |               |         | 46.7  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 38.7  |               |         | 47.3  |                             |         |       |               |         |       |                       |         |               |       |
| 5 Teacher . . . .  |             |         | 38.6  |               |         | 46.9  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 38.6  |               |         | 46.9  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 41.4  |               |         | 48.4  |                             |         |       |               |         |       |                       |         |               |       |
| 6 Teacher or more. |             |         | 40.5  |               |         | 49.8  |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 41.6  |               |         | 48.1  |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| 4 Teacher or more  |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district and   |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| Graded . . . . .   |             |         | 39.6  |               |         | 47.5  |                             |         |       |               |         |       |                       |         |               |       |
| City . . . . .     | 42.3        | 44.3    | 43.0  | 50.7          | 52.1    | 51.1  | 54.8                        | 56.9    | 55.3  |               |         |       |                       |         |               |       |
| 4th class . . . .  | 44.0        | 43.9    | 44.0  | 51.2          | 50.2    | 51.1  | 54.7                        | 59.6    | 54.9  |               |         |       |                       |         |               |       |
| 3d class . . . . . | 41.9        | 43.7    | 42.4  | 50.8          | 50.8    | 50.8  | 54.3                        | 53.3    | 54.2  |               |         |       |                       |         |               |       |
| 2d class . . . . . | 41.1        | 44.5    | 42.8  | 50.1          | 52.6    | 51.2  | 55.4                        | 57.5    | 56.3  |               |         |       |                       |         |               |       |
| Lexington . . . .  | 45.5        | 46.6    | 46.2  | 52.6          | 54.3    | 53.3  | 57.5                        | 60.6    | 58.6  |               |         |       |                       |         |               |       |
| Newport . . . . .  | 41.1        | 44.2    | 42.5  | 51.3          | 55.2    | 53.0  | 51.7                        | 57.2    | 54.7  |               |         |       |                       |         |               |       |
| Paducah . . . . .  | 37.7        | 41.3    | 39.3  | 46.1          | 48.6    | 47.3  | 55.4                        | 54.5    | 55.0  |               |         |       |                       |         |               |       |
| <i>Negro</i>       |             |         |       |               |         |       |                             |         |       |               |         |       |                       |         |               |       |
| Sub-district . .   |             |         | 34.2  |               |         | 40.0  |                             |         |       |               |         |       |                       |         |               |       |
| City . . . . .     | 35.9        | 40.9    | 37.3  | 44.4          | 46.5    | 48.8  | 46.5                        | 49.6    | 47.1  |               |         |       |                       |         |               |       |

Grade norms

|       |      |        |      |
|-------|------|--------|------|
| III B | 33.7 | VI B   | 50.9 |
| A     | 37.3 | A      | 53.7 |
| IV B  | 39.6 | VII B  | 56.0 |
| A     | 41.8 | A      | 58.3 |
| V B   | 44.9 | VIII B | 59.6 |
| A     | 48.0 | A      | 60.9 |

<sup>1</sup>Thorndike-McCall Reading Scale.<sup>2</sup>Thorndike Alpha 11 Scores transmuted to Thorndike-McCall Scale values.

TABLE VII

READING AND ADDITION SCORES OF 13 YEAR OLD PUPILS IN ONE-TEACHER SCHOOLS  
AND IN CITY ELEMENTARY SCHOOLS

| GRADE | NUMBER OF 13-<br>YEAR OLD PUPILS<br>TESTED IN |                 | PERCENTAGE OF<br>13 YEAR OLD<br>PUPILS IN DIF-<br>FERENT GRADES<br>IN |                 | READING SCORES<br>IN    |                 | ADDITION<br>SCORES IN   |                 |
|-------|---|-----------------|---|-----------------|-------------------------|-----------------|-------------------------|-----------------|
|       | 1<br>Teacher<br>Schools                       | City<br>Schools | 1<br>Teacher<br>Schools   | City<br>Schools | 1<br>Teacher<br>Schools | City<br>Schools | 1<br>Teacher<br>Schools | City<br>Schools |
| 3     | 56  | 46              | 6.7   | 3.0             | 25.7                    | 31.6            | 5.5                     | 8.0             |
| 4     | 136   | 89              | 16.3  | 5.9             | 31.1                    | 37.1            | 7.8                     | 10.3            |
| 5     | 269   | 216             | 32.3  | 14.4            | 37.4                    | 40.9            | 9.3                     | 12.6            |
| 6     | 122   | 261             | 14.6  | 17.4            | 38.9                    | 46.6            | 10.2                    | 13.9            |
| 7     | 178   | 436             | 21.4  | 29.0            | 43.7                    | 50.5            | 12.0                    | 15.3            |
| 8     | 72  | 455             | 8.7   | 30.3            | 48.3                    | 56.0            | 13.9                    | 16.5            |
| Total | 833   | 1,503           | 100.0   | 100.0           | 38.1                    | 48.8            | 8.9                     | 14.4            |

TABLE VIII

SUMMARY OF SEVENTH AND EIGHTH GRADE HISTORY SCORES<sup>1</sup> IN KENTUCKY AND SEVENTH GRADE HISTORY SCORES IN NORTH CAROLINA

| KIND OF SCHOOL    | KENTUCKY              |         |              |          |         |                   |          |              |       |          | NORTH CAROLINA        |       |                   |         |
|-------------------|-----------------------|---------|--------------|----------|---------|-------------------|----------|--------------|-------|----------|-----------------------|-------|-------------------|---------|
|                   | Information Questions |         |              |          |         | Thought Questions |          |              |       |          | Information Questions |       | Thought Questions |         |
|                   | Seventh Grade         |         | Eighth Grade |          |         | Seventh Grade     |          | Eighth Grade |       |          | Seventh Grade         |       | Seventh Grade     |         |
|                   | 1st half              | 2d half | Total        | 1st half | 2d half | Total             | 1st half | 2d half      | Total | 1st half | 2d half               | Total | 1st half          | 2d half |
| <i>White</i>      |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| 1 Teacher         |                       |         | 7.0          |          |         | 9.7               |          |              | 3.8   |          |                       | 6.8   |                   |         |
| Sub-district      |                       |         | 7.0          |          |         | 9.7               |          |              | 3.8   |          |                       | 6.8   |                   |         |
| Graded            |                       |         | 10.0         |          |         |                   |          |              | 5.0   |          |                       |       |                   |         |
| 2 Teacher         |                       |         | 7.1          |          |         | 9.7               |          |              | 6.5   |          |                       | 7.1   |                   |         |
| Sub-district      |                       |         | 7.5          |          |         | 9.6               |          |              | 7.7   |          |                       | 7.8   |                   |         |
| Graded            |                       |         | 6.8          |          |         | 10.0              |          |              | 0.0   |          |                       | 3.6   |                   |         |
| 3 Teacher         |                       |         | 9.3          |          |         | 12.1              |          |              | 5.7   |          |                       | 10.0  |                   |         |
| Sub-district      |                       |         | 9.4          |          |         | 12.0              |          |              | 4.3   |          |                       | 9.2   |                   |         |
| Graded            |                       |         | 9.2          |          |         | 13.1              |          |              | 6.2   |          |                       | 12.7  |                   |         |
| 4 Teacher         |                       |         | 9.3          |          |         | 10.9              |          |              | 6.3   |          |                       | 10.4  |                   |         |
| Sub-district      |                       |         | 9.2          |          |         | 9.9               |          |              | 6.3   |          |                       | 9.9   |                   |         |
| Graded            |                       |         | 9.4          |          |         | 12.3              |          |              | 6.8   |          |                       | 10.7  |                   |         |
| 5 Teacher         |                       |         | 9.4          |          |         | 13.5              |          |              | 4.4   |          |                       | 10.5  |                   |         |
| Sub-district      |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| Graded            |                       |         | 9.4          |          |         | 13.5              |          |              | 4.4   |          |                       | 10.5  |                   |         |
| 6 Teacher or more |                       |         | 10.1         |          |         | 15.5              |          |              | 7.9   |          |                       | 14.5  |                   |         |
| Sub-district      |                       |         | 9.9          |          |         | 16.3              |          |              | 11.0  |          |                       | 13.5  |                   |         |
| Graded            |                       |         | 10.2         |          |         | 15.1              |          |              | 6.9   |          |                       | 14.9  |                   |         |
| 4 Teacher or more |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| Sub-district and  |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| Graded            |                       |         | 9.6          |          |         | 13.5              |          |              | 6.5   |          |                       | 9.7   |                   |         |
| City              | 10.2                  | 13.1    | 11.0         | 13.6     | 13.1    |                   | 9.9      | 12.9         |       | 15.4     | 16.9                  |       |                   |         |
| 4th Class         | 9.8                   | 12.0    | 9.9          | 14.1     |         | 14.1              | 12.0     | 12.0         |       | 15.8     |                       |       |                   |         |
| 3d Class          | 9.6                   | 9.9     | 9.7          | 13.1     | 13.5    | 13.2              | 9.3      | 8.3          | 9.1   | 14.8     | 13.0                  |       |                   |         |
| 2d Class          | 10.9                  | 13.6    | 12.5         | 13.4     | 12.9    | 13.2              | 9.7      | 14.0         | 12.2  | 15.6     | 17.6                  |       |                   |         |
| Lexington         | 12.3                  | 13.7    | 12.9         | 14.1     |         | 14.1              | 12.2     | 15.2         | 12.7  | 16.4     |                       |       |                   |         |
| Newport           | 10.4                  | 14.6    | 12.4         | 12.8     | 13.0    | 12.9              | 9.5      | 16.8         | 13.1  | 15.6     |                       |       |                   |         |
| Paducah           | 10.9                  | 12.8    | 12.3         | 12.8     | 12.8    | 12.8              | 7.5      | 11.0         | 9.0   | 13.5     | 15.9                  |       |                   |         |
| <i>Negro</i>      |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| Sub-district      |                       |         | 6.3          |          |         | 9.5               |          |              | 3.1   |          |                       | 3.4   |                   |         |
| City              | 7.1                   | 9.9     | 7.8          | 9.6      | 10.3    | 9.8               | 3.7      | 8.2          | 3.9   | 6.8      | 8.4                   |       |                   |         |
| New York City     |                       |         |              |          |         |                   |          |              |       |          |                       |       |                   |         |
| Grade Norms.      | 15.1                  |         |              | 19.0     |         |                   | 16.6     |              |       | 19.1     |                       |       |                   |         |

<sup>1</sup>Questions taken from Van Wagenen History scales.

TABLE IX  
SUMMARY OF ELEMENTARY SCHOOL SPELLING SCORES<sup>1</sup> IN KENTUCKY

| KIND OF SCHOOL  | KENTUCKY    |         |       |               |         |       |              |         |       |
|---|-------------|---------|-------|---------------|---------|-------|--------------|---------|-------|
|   | Fifth Grade |         |       | Seventh Grade |         |       | Eighth Grade |         |       |
|   | 1st half    | 2d half | Total | 1st half      | 2d half | Total | 1st half     | 2d half | Total |
| <i>White</i>  |             |         |       |               |         |       |              |         |       |
| 1 Teacher . . .                                       |             |         | 48.2  |               |         | 32.7  |              |         | 44.6  |
| Sub-district . . .                                    |             |         | 48.3  |               |         | 32.6  |              |         | 44.6  |
| Graded . . .  |             |         | 39.5  |               |         | 36.8  |              |         |       |
| 2 Teacher . . .                                       |             |         | 50.6  |               |         | 37.4  |              |         | 44.1  |
| Sub-district . . .                                    |             |         | 50.7  |               |         | 38.5  |              |         | 40.8  |
| Graded . . .  |             |         | 50.0  |               |         | 32.6  |              |         | 61.6  |
| 3 Teacher . . .                                       |             |         | 55.8  |               |         | 31.0  |              |         | 47.8  |
| Sub-district . . .                                    |             |         | 52.3  |               |         | 29.5  |              |         | 43.1  |
| Graded . . .  |             |         | 61.9  |               |         | 33.2  |              |         | 55.6  |
| 4 Teacher . . .                                       |             |         | 55.3  |               |         | 37.6  |              |         | 51.9  |
| Sub-district . . .                                    |             |         | 52.0  |               |         | 29.5  |              |         | 45.9  |
| Graded . . .  |             |         | 58.4  |               |         | 44.6  |              |         | 57.3  |
| 5 Teacher . . .                                       |             |         | 52.5  |               |         | 37.9  |              |         | 52.7  |
| Sub-district . . .                                    |             |         |       |               |         |       |              |         |       |
| Graded . . .  |             |         | 52.5  |               |         | 37.9  |              |         | 52.7  |
| 6 Teacher or more . . .                               |             |         | 71.1  |               |         | 41.1  |              |         | 51.7  |
| Sub-district . . .                                    |             |         | 71.3  |               |         | 28.2  |              |         | 38.6  |
| Graded . . .  |             |         | 71.0  |               |         | 44.2  |              |         | 55.9  |
| 4 Teacher or more<br>Sub-district and<br>Graded . . . |             |         | 59.4  |               |         | 38.8  |              |         | 52.0  |
| <i>City</i> . . .                                     | 64.0        | 68.4    | 65.5  | 42.6          | 49.0    | 44.4  | 61.1         | 62.7    | 61.4  |
| 4th Class . . .                                       | 66.9        | 69.7    | 67.1  | 44.1          | 54.6    | 45.1  | 61.7         | 61.2    | 61.7  |
| 3d Class . . .  | 66.0        | 64.3    | 65.5  | 47.3          | 46.6    | 47.2  | 65.0         | 66.9    | 65.2  |
| 2d Class . . .  | 59.0        | 69.8    | 64.5  | 36.8          | 48.9    | 42.3  | 56.3         | 61.8    | 58.7  |
| Lexington . . .                                       | 73.8        | 79.8    | 77.5  | 47.3          | 61.1    | 53.3  | 61.7         | ...     | 61.7  |
| Newport . . .   | 59.9        | 68.0    | 63.7  | 37.5          | 53.9    | 44.8  | 63.1         | 74.0    | 69.1  |
| Paducah . . .   | 46.1        | 56.4    | 50.7  | 21.8          | 32.5    | 26.9  | 45.1         | 45.8    | 45.4  |
| <i>Negro</i>  |             |         |       |               |         |       |              |         |       |
| Sub-district . . .                                    |             |         | 38.9  |               |         | 23.7  |              |         | 38.7  |
| City . . .  | 45.2        | 61.3    | 49.6  | 31.4          | 40.1    | 33.0  | 42.2         | 51.7    | 44.1  |
| Grade norms . . .                                     |             |         | 73.0  |               |         | 58.0  |              |         | 73.0  |

<sup>1</sup>Words taken from Ashbaugh-Iowa Spelling Scale.

TABLE X

SUMMARY OF ELEMENTARY SCHOOL ADDITION SCORES<sup>1</sup> IN KENTUCKY AND SIMILAR SCORES FOR NORTH CAROLINA AND VIRGINIA

| KIND OF SCHOOL     | KENTUCKY    |            |       |               |            |       | NORTH CAROLINA |            |       |               |            |       | VIRGINIA    |            |       |               |            |       |
|--------------------|-------------|------------|-------|---------------|------------|-------|----------------|------------|-------|---------------|------------|-------|-------------|------------|-------|---------------|------------|-------|
|                    | Fifth Grade |            |       | Seventh Grade |            |       | Fifth Grade    |            |       | Seventh Grade |            |       | Fifth Grade |            |       | Seventh Grade |            |       |
|                    | 1st<br>half | 2d<br>half | Total | 1st<br>half   | 2d<br>half | Total | 1st<br>half    | 2d<br>half | Total | 1st<br>half   | 2d<br>half | Total | 1st<br>half | 2d<br>half | Total | 1st<br>half   | 2d<br>half | Total |
| <i>White</i>       |             |            |       |               |            |       |                |            |       |               |            |       |             |            |       |               |            |       |
| 1 Teacher . . .    |             |            | 9.4   |               |            | 12.1  |                |            |       |               |            | 13.5  |             |            |       |               |            | 13.6  |
| Sub-district . .   |             |            | 9.4   |               |            | 12.1  |                |            |       |               |            | 13.5  |             |            |       |               |            |       |
| Graded . . . . .   |             |            | 9.3   |               |            | 13.0  |                |            |       |               |            |       |             |            |       |               |            |       |
| 2 Teacher . . . .  |             |            | 10.3  |               |            | 12.8  |                |            |       |               |            | 13.8  |             |            |       |               |            | 14.8  |
| Sub-district . .   |             |            | 10.2  |               |            | 12.8  |                |            |       |               |            | 13.7  |             |            |       |               |            |       |
| Graded . . . . .   |             |            | 10.8  |               |            | 12.6  |                |            |       |               |            | 15.0  |             |            |       |               |            |       |
| 3 Teacher . . . .  |             |            | 10.3  |               |            | 13.1  |                |            |       |               |            | 13.8  |             |            |       |               |            |       |
| Sub-district . .   |             |            | 9.6   |               |            | 13.4  |                |            |       |               |            | 12.8  |             |            |       |               |            | 14.4  |
| Graded . . . . .   |             |            | 11.3  |               |            | 12.3  |                |            |       |               |            | 14.7  |             |            |       |               |            |       |
| 4 Teacher . . . .  |             |            | 11.0  |               |            | 13.4  |                |            |       |               |            | 14.1  |             |            |       |               |            |       |
| Sub-district . .   |             |            | 10.7  |               |            | 12.6  |                |            |       |               |            | 13.6  |             |            |       |               |            |       |
| Graded . . . . .   |             |            | 11.4  |               |            | 13.9  |                |            |       |               |            | 14.9  |             |            |       |               |            |       |
| 5 Teacher . . . .  |             |            | 10.7  |               |            | 13.2  |                |            |       |               |            | 15.1  |             |            |       |               |            |       |
| Sub-district . .   |             |            | 10.7  |               |            | 13.2  |                |            |       |               |            | 15.1  |             |            |       |               |            |       |
| Graded . . . . .   |             |            | 12.8  |               |            | 14.9  |                |            |       |               |            | 15.1  |             |            |       |               |            |       |
| 6 Teacher or more. |             |            | 12.4  |               |            | 15.0  |                |            |       |               |            | 15.5  |             |            |       |               |            |       |
| Sub-district . .   |             |            | 13.0  |               |            | 14.9  |                |            |       |               |            | 15.1  |             |            |       |               |            |       |
| Graded . . . . .   |             |            |       |               |            |       |                |            |       |               |            |       |             |            |       |               |            |       |
| 4 Teacher or more  |             |            |       |               |            |       |                |            |       |               |            |       |             |            |       |               |            |       |
| Sub-district . .   |             |            |       |               |            |       |                |            |       |               |            |       |             |            |       |               |            |       |
| and Graded . . .   |             |            | 11.5  |               |            | 13.8  |                |            |       |               |            | 14.5  |             |            |       |               |            | 15.2  |
| City . . . . .     | 12.6        | 13.7       | 12.9  | 15.3          | 15.4       | 15.3  | 16.0           | 16.4       | 16.0  |               |            |       |             |            |       |               |            |       |
| 4th class . . . .  | 12.8        | 13.9       | 12.9  | 15.3          | 15.6       | 15.5  | 16.4           | 15.5       | 16.3  |               |            |       |             |            |       |               |            |       |
| 3d class . . . . . | 12.5        | 13.4       | 12.7  | 15.3          | 16.0       | 15.3  | 15.6           | 16.7       | 15.7  |               |            |       |             |            |       |               |            |       |
| 2d class . . . . . | 12.6        | 13.7       | 13.1  | 15.2          | 15.2       | 15.2  | 16.2           | 16.4       | 16.2  |               |            |       |             |            |       |               |            |       |
| Lexington . . . .  | 13.3        | 14.5       | 14.1  | 16.2          | 15.8       | 16.1  | 16.7           | —          | 16.7  |               |            |       |             |            |       |               |            |       |
| Newport . . . . .  | 13.7        | 14.3       | 14.0  | 15.9          | 15.9       | 15.9  | 16.9           | 17.2       | 17.1  |               |            |       |             |            |       |               |            |       |
| Paducah . . . . .  | 10.5        | 11.4       | 10.8  | 13.1          | 13.3       | 13.2  | 14.1           | 15.1       | 14.4  |               |            |       |             |            |       |               |            |       |
| <i>Negro</i>       |             |            |       |               |            |       |                |            |       |               |            |       |             |            |       |               |            |       |
| Sub-district . .   |             |            | 9.2   |               |            | 11.3  |                |            |       |               |            | 13.9  |             |            |       |               |            |       |
| City . . . . .     | 9.8         | 12.0       | 10.4  | 12.8          | 13.9       | 13.1  | 13.0           | 14.1       | 13.3  |               |            |       |             |            |       |               |            |       |

TABLE XI

SUMMARY OF ELEMENTARY SCHOOL MULTIPLICATION SCORES<sup>1</sup> IN KENTUCKY AND SIMILAR SCORES FOR NORTH CAROLINA AND VIRGINIA

| KIND OF SCHOOL     | KENTUCKY SCORES |            |       |               |            |       | NORTH CAROLINA SCORES |            |       |             |            |       | VIRGINIA SCORES |            |       |             |            |       |
|--------------------|-----------------|------------|-------|---------------|------------|-------|-----------------------|------------|-------|-------------|------------|-------|-----------------|------------|-------|-------------|------------|-------|
|                    | Fifth Grade     |            |       | Seventh Grade |            |       | Eighth Grade          |            |       | Fifth Grade |            |       | Seventh Grade   |            |       | Fifth Grade |            |       |
|                    | 1st<br>half     | 2d<br>half | Total | 1st<br>half   | 2d<br>half | Total | 1st<br>half           | 2d<br>half | Total | 1st<br>half | 2d<br>half | Total | 1st<br>half     | 2d<br>half | Total | 1st<br>half | 2d<br>half | Total |
| <i>White</i>       |                 |            |       |               |            |       |                       |            |       |             |            |       |                 |            |       |             |            |       |
| 1 Teacher . . .    |                 |            | 7.8   |               |            | 11.5  |                       |            | 13.6  |             |            |       |                 |            | 12.3  |             |            | 14.1  |
| Sub-district . .   |                 |            | 7.8   |               |            | 11.5  |                       |            | 13.6  |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 8.3   |               |            | 12.7  |                       |            |       |             |            |       |                 |            |       |             |            |       |
| 2 Teacher . . . .  |                 |            | 8.9   |               |            | 12.8  |                       |            | 13.4  |             |            |       |                 |            | 12.1  |             |            | 14.8  |
| Sub-district . .   |                 |            | 8.9   |               |            | 13.1  |                       |            | 13.3  |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 8.6   |               |            | 12.1  |                       |            | 13.7  |             |            |       |                 |            |       |             |            |       |
| 3 Teacher . . . .  |                 |            | 9.0   |               |            | 12.8  |                       |            | 14.0  |             |            |       |                 |            |       |             |            |       |
| Sub-district . .   |                 |            | 8.8   |               |            | 13.3  |                       |            | 13.8  |             |            |       |                 |            | 12.6  |             |            | 15.2  |
| Graded . . . . .   |                 |            | 9.3   |               |            | 12.1  |                       |            | 14.4  |             |            |       |                 |            |       |             |            |       |
| 4 Teacher . . . .  |                 |            | 9.2   |               |            | 12.3  |                       |            | 14.4  |             |            |       |                 |            |       |             |            |       |
| Sub-district . .   |                 |            | 8.5   |               |            | 11.7  |                       |            | 13.4  |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 9.6   |               |            | 12.8  |                       |            | 15.1  |             |            |       |                 |            |       |             |            |       |
| 5 Teacher . . . .  |                 |            | 8.6   |               |            | 12.5  |                       |            | 14.6  |             |            |       |                 |            |       |             |            |       |
| Sub-district . .   |                 |            |       |               |            |       |                       |            |       |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 8.6   |               |            | 12.5  |                       |            | 14.6  |             |            |       |                 |            |       |             |            |       |
| Teacher or more.   |                 |            | 11.3  |               |            | 14.9  |                       |            | 15.3  |             |            |       |                 |            |       |             |            |       |
| Sub-district . .   |                 |            | 11.3  |               |            | 13.7  |                       |            | 16.3  |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 11.3  |               |            | 15.3  |                       |            | 15.1  |             |            |       |                 |            |       |             |            |       |
| 4 Teacher or more  |                 |            |       |               |            |       |                       |            |       |             |            |       |                 |            |       |             |            |       |
| Sub-district and   |                 |            |       |               |            |       |                       |            |       |             |            |       |                 |            |       |             |            |       |
| Graded . . . . .   |                 |            | 9.7   |               |            | 13.3  |                       |            | 14.8  |             |            |       |                 |            | 10.7  |             |            | 14.5  |
| City . . . . .     | 10.3            | 11.7       | 10.7  | 14.6          | 15.1       | 14.7  | 15.7                  | 15.8       | 14.8  |             |            |       |                 |            |       |             |            |       |
| 4th class . . . .  | 10.7            | 12.6       | 10.8  | 15.0          | 15.4       | 15.1  | 16.2                  | —          | 15.7  |             |            |       |                 |            |       |             |            |       |
| 3d class . . . . . | 9.9             | 11.0       | 10.2  | 14.3          | 14.7       | 14.4  | 15.3                  | 16.5       | 16.2  | 10.7        |            |       | 14.2            |            |       |             |            |       |
| 2d class . . . . . | 10.6            | 12.1       | 11.3  | 14.5          | 15.2       | 14.8  | 15.6                  | 15.7       | 15.7  |             |            |       | 13.5            | 14.1       |       |             |            |       |
| Lexington . . . .  | 12.2            | 13.1       | 12.8  | 15.5          | 16.5       | 15.9  | 16.9                  | —          | 16.9  | 9.2         | 10.3       |       |                 |            |       |             |            |       |
| Newport . . . . .  | 11.0            | 12.4       | 11.6  | 15.2          | 16.2       | 15.7  | 15.8                  | 16.8       | 16.2  |             |            |       |                 |            |       |             |            |       |
| Paducah . . . . .  | 8.4             | 9.9        | 9.1   | 11.5          | 11.9       | 11.7  | 12.7                  | 14.0       | 13.2  |             |            |       |                 |            |       |             |            |       |
| <i>Negro</i>       |                 |            |       |               |            |       |                       |            |       |             |            |       |                 |            |       |             |            |       |
| Sub-district . .   |                 |            | 5.9   |               |            | 9.6   |                       |            | 12.6  |             |            |       |                 |            |       |             |            |       |
| City . . . . .     | 7.5             | 9.4        | 8.2   | 11.2          | 13.1       | 11.4  | 12.3                  | 13.2       | 12.5  |             |            |       |                 |            |       |             |            |       |

Grade norms  
 III 5.9  
 IV 10.4  
 V 11.6  
 VI 14.6  
 VII 15.9  
 VIII 17.2

<sup>1</sup>Woody Multiplication Scale, Series B.

TABLE XII

AVERAGES OF THE PERCENTAGES OF EIGHTH GRADE PUPILS WITH SCORES IN ARITHMETIC AND READING ABOVE AND BELOW STANDARD SCORES FOR THIS GRADE

| KIND OF SCHOOL    | PERCENTAGE OF PUPILS WHO MADE SCORES WHICH WERE |                          |                          |                          |                          |                          |                                   |
|-------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------|
|                   | Below 3rd Grade Standard                        | Below 4th Grade Standard | Below 5th Grade Standard | Below 6th Grade Standard | Below 7th Grade Standard | Below 8th Grade Standard | Up to or Above 8th Grade Standard |
| 1 Teacher         | 5.6   | 23.8                     | 40.7                     | 65.6                     | 80.2                     | 88.9                     | 11.1                              |
| Sub-district      | 5.6   | 23.8                     | 40.7                     | 65.6                     | 80.2                     | 88.9                     | 11.1                              |
| Graded            | 2.1   | 16.5                     | 32.9                     | 63.6                     | 81.2                     | 90.6                     | 9.4                               |
| 2 Teacher         | 2.5   | 19.3                     | 36.0                     | 67.0                     | 84.1                     | 92.0                     | 8.0                               |
| Sub-district      | 2.1   | 16.5                     | 32.9                     | 63.6                     | 81.2                     | 90.6                     | 9.4                               |
| Graded            | 4.1   | 20.3                     | 33.2                     | 61.1                     | 77.7                     | 83.3                     | 16.7                              |
| 3 Teacher         | 5.6   | 26.7                     | 40.6                     | 65.9                     | 81.0                     | 87.6                     | 12.4                              |
| Sub-district      | 1.6   | 9.8                      | 21.1                     | 53.1                     | 72.2                     | 85.6                     | 14.4                              |
| Graded            | 2.1   | 16.2                     | 29.7                     | 58.5                     | 74.9                     | 88.9                     | 11.1                              |
| 4 Teacher         | 3.1   | 22.6                     | 39.0                     | 67.2                     | 81.6                     | 93.3                     | 6.7                               |
| Sub-district      | 0.9   | 9.0                      | 19.2                     | 48.8                     | 68.9                     | 84.9                     | 16.0                              |
| Graded            | 1.0   | 12.3                     | 29.6                     | 50.0                     | 71.2                     | 86.1                     | 13.9                              |
| 5 Teacher         | 1.0   | 12.3                     | 29.6                     | 50.0                     | 71.2                     | 86.1                     | 13.9                              |
| Sub-district      | 0.5   | 7.5                      | 16.5                     | 35.8                     | 65.6                     | 87.1                     | 12.9                              |
| Graded            | 1.9   | 11.1                     | 20.4                     | 40.7                     | 62.9                     | 87.0                     | 13.0                              |
| 6 Teacher or more | 0.5   | 6.4                      | 15.3                     | 34.2                     | 66.4                     | 87.1                     | 12.9                              |
| Sub-district      | 0.5   | 5.7                      | 13.3                     | 36.5                     | 54.2                     | 71.7                     | 28.3                              |
| Graded            | 0.2   | 4.6                      | 13.3                     | 35.6                     | 52.1                     | 69.2                     | 30.8                              |
| Cities            | 0.4   | 5.4                      | 13.6                     | 39.8                     | 58.8                     | 75.3                     | 24.7                              |
| 4th Class         | 0.8   | 7.2                      | 13.0                     | 33.9                     | 51.6                     | 70.6                     | 29.4                              |
| 3d Class          |   |                          |                          |                          |                          |                          |                                   |
| 2d Class          |   |                          |                          |                          |                          |                          |                                   |

TABLE XIII  
SUMMARY OF HIGH SCHOOL READING SCORES <sup>1</sup>

| KIND OF SCHOOL    | FIRST YEAR    |             |       | SECOND YEAR   |             |       | THIRD YEAR    |             |       | FOURTH YEAR   |             |       |
|-------------------|---------------|-------------|-------|---------------|-------------|-------|---------------|-------------|-------|---------------|-------------|-------|
|                   | Number Tested | Average Age | Score | Number Tested | Average Age | Score | Number Tested | Average Age | Score | Number Tested | Average Age | Score |
| <i>White</i>      |               | yrs. mos.   |       |               | yrs. mos.   |       |               | yrs. mos.   |       |               | yrs. mos.   |       |
| Rural High        | 486           | 15-2        | 54.9  | 330           | 16-0        | 56.0  | 178           | 17-1        | 60.6  | 151           | 17-11       | 62.4  |
| City High         | 1,078         | 14-9        | 59.2  | 728           | 15-7        | 61.7  | 511           | 16-5        | 63.2  | 410           | 17-5        | 65.4  |
| 4th Class         | 317           | 15-0        | 58.5  | 210           | 15-7        | 61.0  | 155           | 16-8        | 62.7  | 138           | 17-5        | 64.9  |
| 3d Class          | 329           | 14-7        | 58.3  | 223           | 15-6        | 60.8  | 168           | 16-3        | 63.1  | 149           | 17-7        | 65.3  |
| 2d Class          | 432           | 14-9        | 60.5  | 295           | 15-7        | 62.9  | 188           | 16-5        | 63.8  | 123           | 17-2        | 66.1  |
| <i>Negro High</i> | 152           | 15-6        | 50.5  | 108           | 16-0        | 53.9  | 45            | 17-0        | 54.8  | 42            | 18-0        | 56.4  |

<sup>1</sup> Thorndike-McCall Reading Scale.

OF TIME

| KIND OF SCHOOL  | TO 20 MONTHS                                  |                                      | FROM 21 TO 24 MONTHS                  |   |                                      |
|-----------------|---|--------------------------------------|---------------------------------------|---|--------------------------------------|
|                 | Addi-<br>tion<br>and<br>Sub-<br>trac-<br>tion | Equa-<br>tion<br>and<br>For-<br>mula | Num-<br>ber<br>of<br>Pupils<br>Tested | Addi-<br>tion<br>and<br>Sub-<br>trac-<br>tion | Equa-<br>tion<br>and<br>For-<br>mula |
| Kentucky        | 5.4   | 5.5                                  |                                       |   |                                      |
| Rural High. . . | 5.5   | 6.5                                  | 24                                    | 5.8   | 5.9                                  |
| City High . . . |   |                                      |                                       |   |                                      |
| 2d class . . .  | 7.1   | 6.4                                  |                                       |   |                                      |
| 3d " . . .      | 6.3   | 6.7                                  | 24                                    | 5.8   | 5.9                                  |
| 4th " . . .     |   |                                      |                                       |   |                                      |
| North Carolina  | 5.6   | 6.0                                  | 10                                    | 5.7   | 5.0                                  |
| Rural High. . . | 4.8   | 5.7                                  | 26                                    | 4.4   | 6.3                                  |
| Small City High | 5.2   | 5.8                                  |                                       |   |                                      |
| Large City High |   |                                      |                                       |   |                                      |
| Virginia        |   |                                      |                                       |   |                                      |
| Rural High. . . |   |                                      |                                       |   |                                      |
| City High . . . |   |                                      |                                       |   |                                      |
| Hotz Standard . |   |                                      |                                       |   |                                      |







TABLE XIV  
PER CENT. OF RURAL AND CITY HIGH SCHOOL PUPILS WITH SCORES IN READING UP TO NORMAL AND BELOW NORMAL

| SCHOOL AND CLASS | PER CENT. OF PUPILS WITH SCORES BELOW NORMAL |                          |                          |                          |                          |                          |                         | PER CENT. OF PUPILS UP TO OR ABOVE NORMAL | TOTAL NUMBER OF PUPILS |
|------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------|---|------------------------|
|                  | More than 7 grades below                     | More than 6 grades below | More than 5 grades below | More than 4 grades below | More than 3 grades below | More than 2 grades below | More than 1 grade below |   |                        |
| Rural High       |  |                          |                          |                          |                          |                          |                         |   |                        |
| 1st year pupils  |  | 0.6                      | 3.3                      | 12.6                     | 28.6                     | 54.5                     | 75.5                    | 81.5                                      | 486                    |
| 2d " "           |  | 4.3                      | 9.7                      | 27.6                     | 50.9                     | 68.5                     | 75.2                    | 79.7                                      | 330                    |
| 3d " "           | 0.6  | 1.1                      | 7.3                      | 27.0                     | 48.9                     | 58.4                     | 65.1                    | 71.4                                      | 178                    |
| 4th " "          | 3.3  | 10.6                     | 23.2                     | 35.1                     | 45.7                     | 54.3                     | 60.9                    | 70.2                                      | 151                    |
| Total . . . .    | 0.5  | 3.1                      | 8.4                      | 22.1                     | 40.4                     | 59.1                     | 71.9                    | 77.9                                      | 1,145                  |
| City High        |  |                          |                          |                          |                          |                          |                         |   |                        |
| 1st year pupils  |  | 0.4                      | 0.7                      | 2.4                      | 12.2                     | 33.3                     | 56.4                    | 65.9                                      | 1,078                  |
| 2d " "           |  | 0.1                      | 1.2                      | 5.4                      | 21.0                     | 41.6                     | 53.2                    | 61.0                                      | 728                    |
| 3d " "           |  | 0.6                      | 3.0                      | 15.0                     | 34.6                     | 45.8                     | 53.6                    | 60.6                                      | 511                    |
| 4th " "          | 0.5  | 1.4                      | 8.0                      | 23.1                     | 33.7                     | 41.1                     | 48.5                    | 59.0                                      | 410                    |
| Total . . . .    | 0.1  | 0.5                      | 2.4                      | 8.7                      | 22.0                     | 39.0                     | 53.8                    | 62.6                                      | 2,727                  |

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